American Fabrics

NUMBER FIVE • 1948 • THREE DOLLARS A COPY

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. . . dedicated to the belief that Fashion begins with the Fabric . . .

that the American textile industry casts a major influence on the economic and social aspects of the world in which we live . . . that American textiledom has deservedly attained the world's pinnacle from which it can never be dislodged. To all who work within or with the industry, this fifth volume of American Fabrics, giving special editorial attention to the Near and Middle East Exhibit of the Metropolitan Museum of Art, is offered as a measure of help, of service . . . and, we hope, of inspiration.

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Number Five Winter 1948

Fashion Begins with the Fabric

American Fabrics

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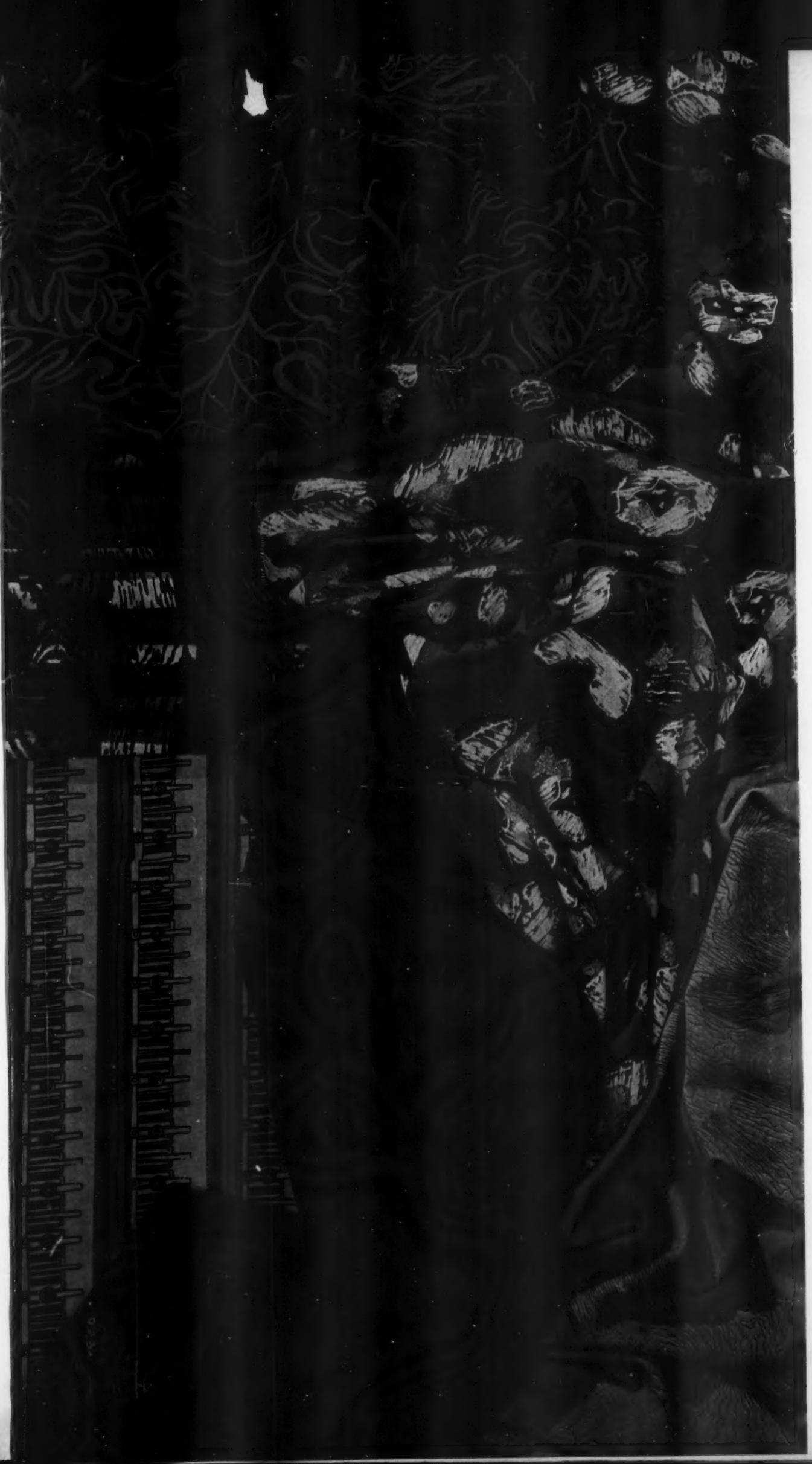

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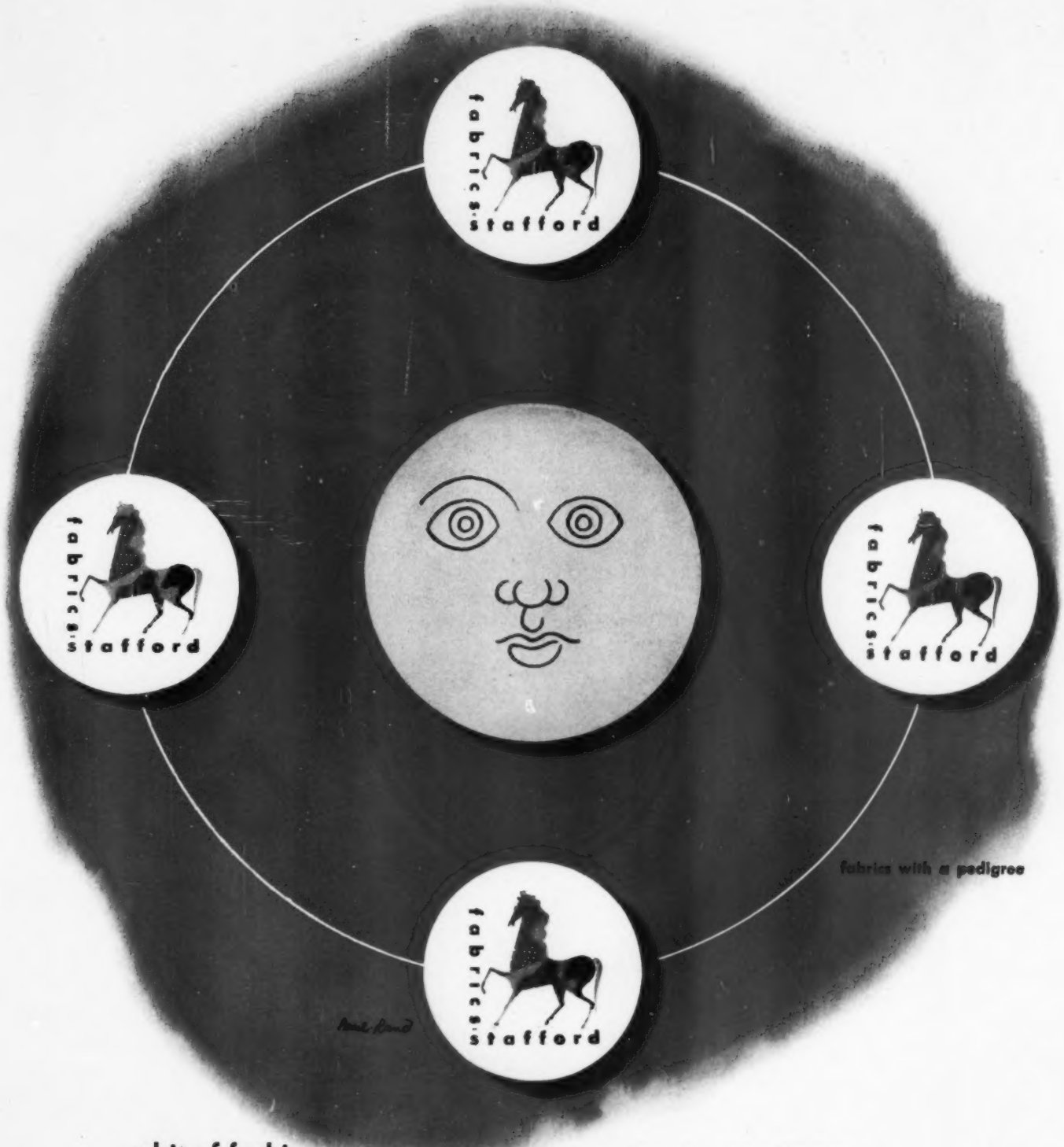

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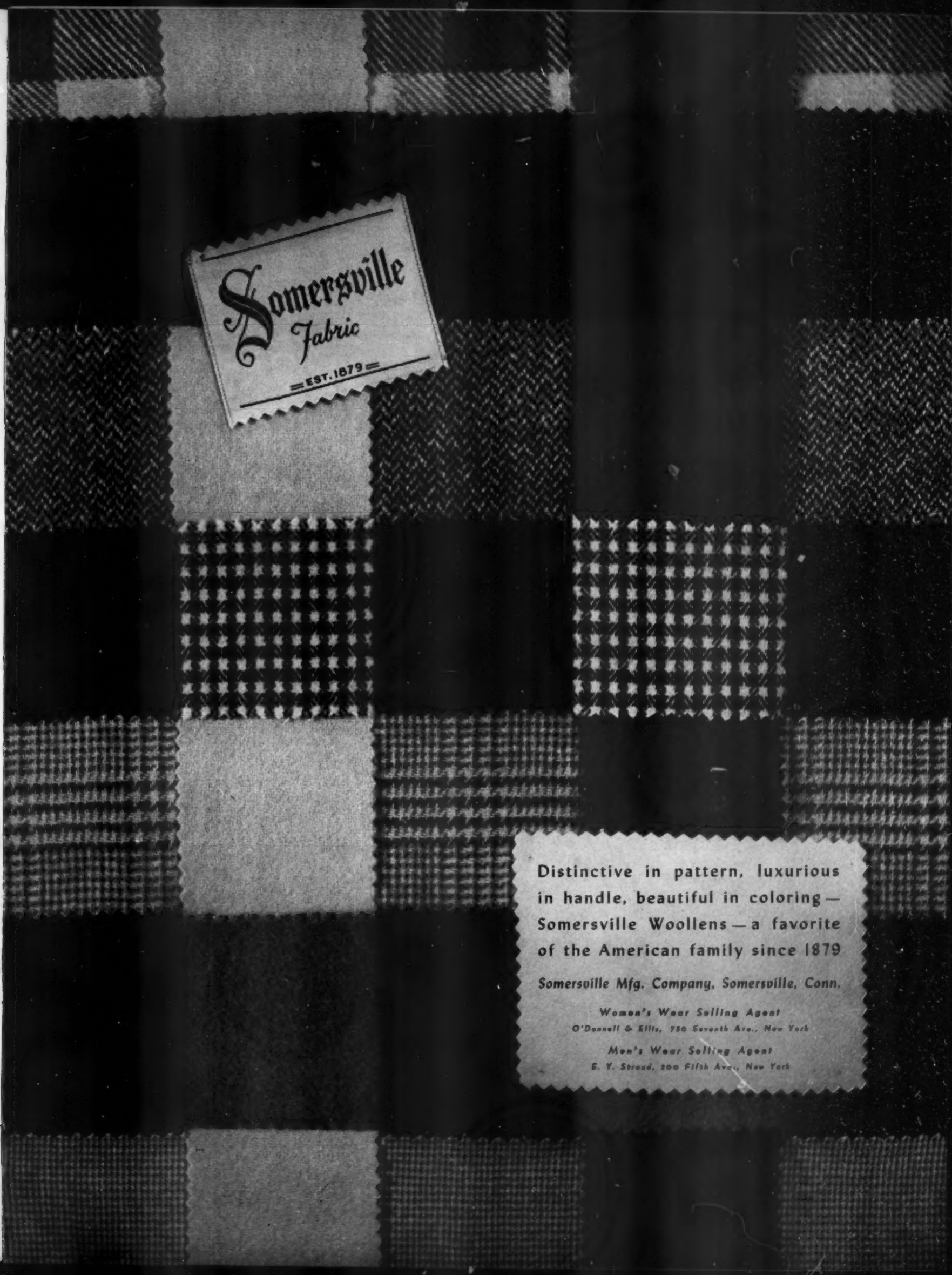

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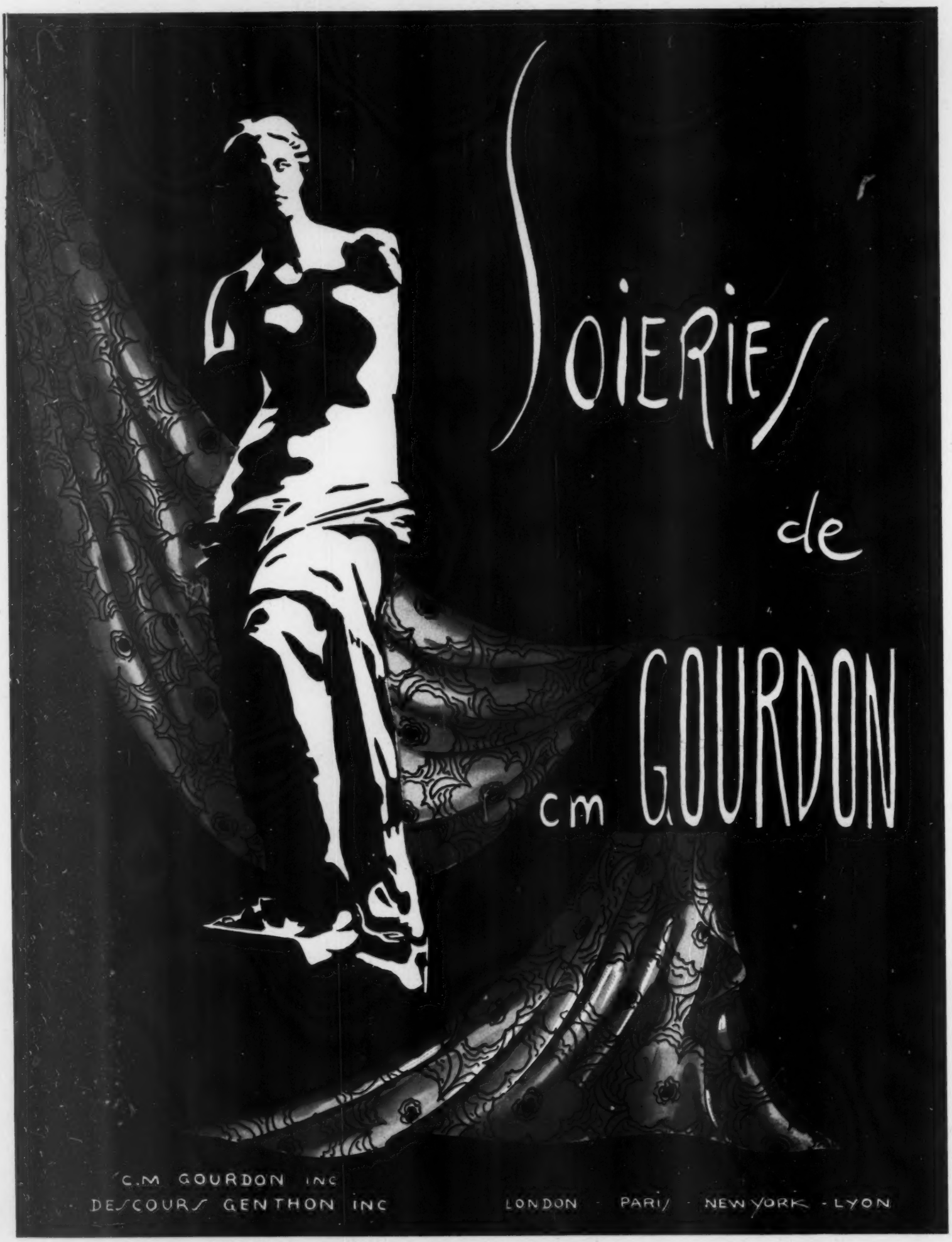
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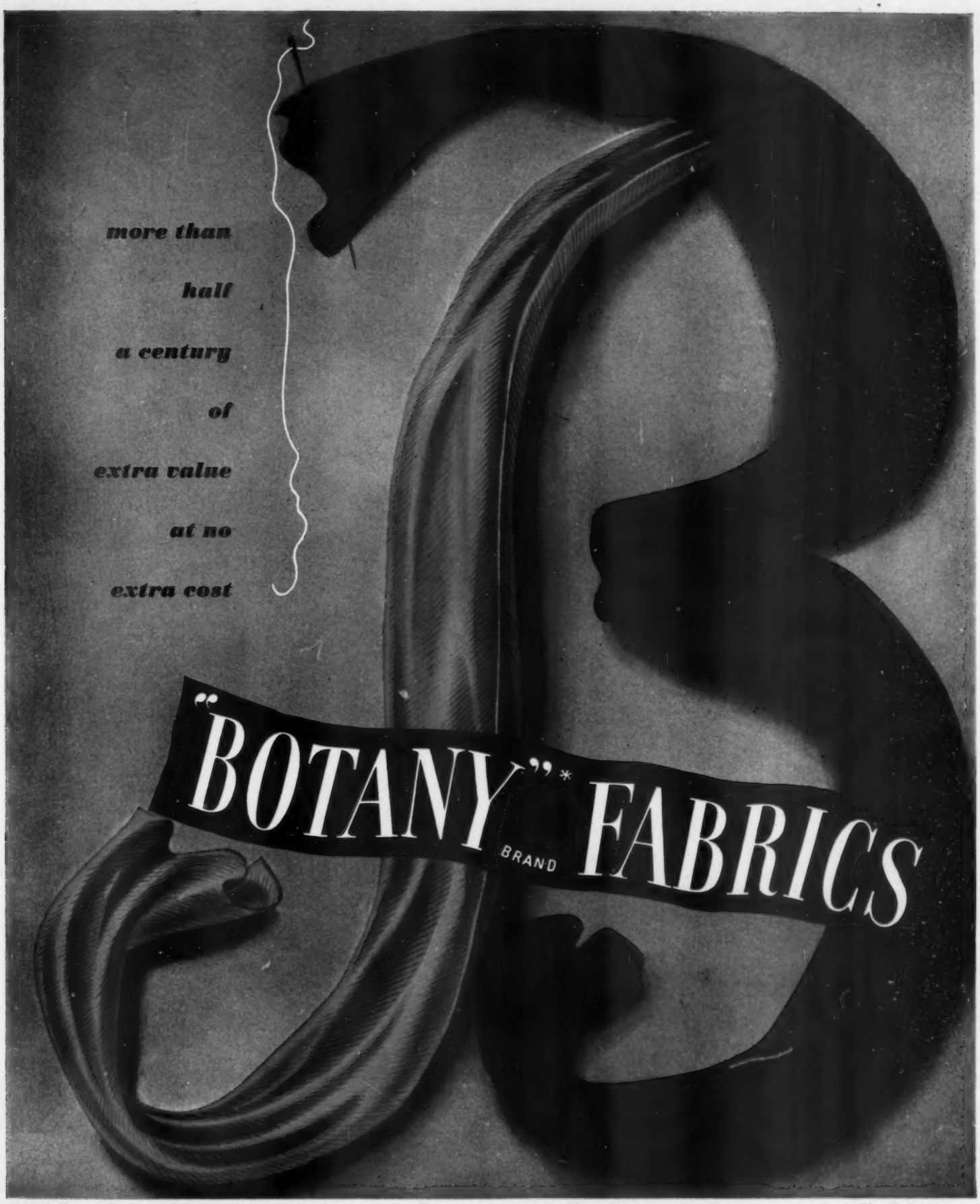

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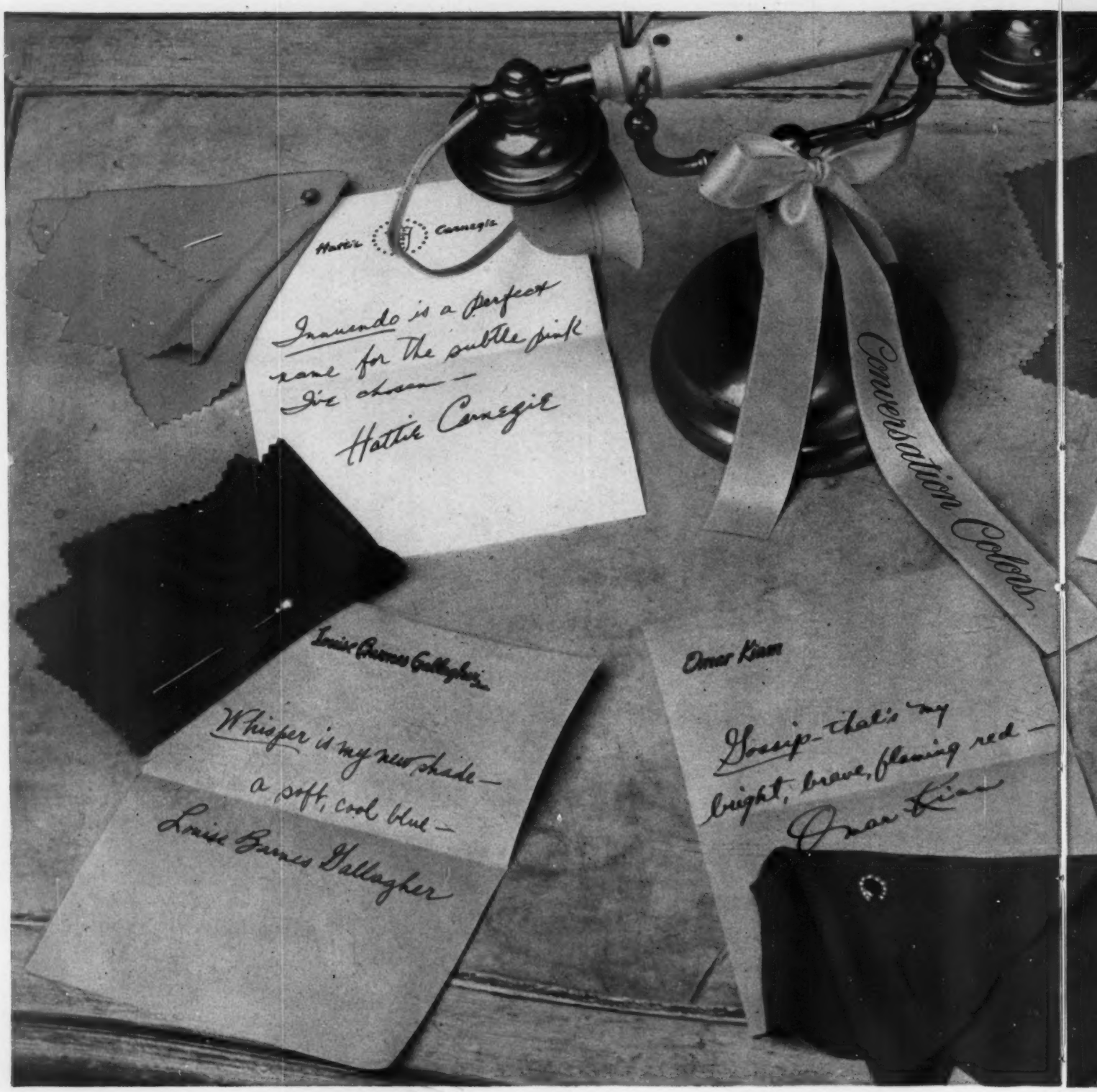
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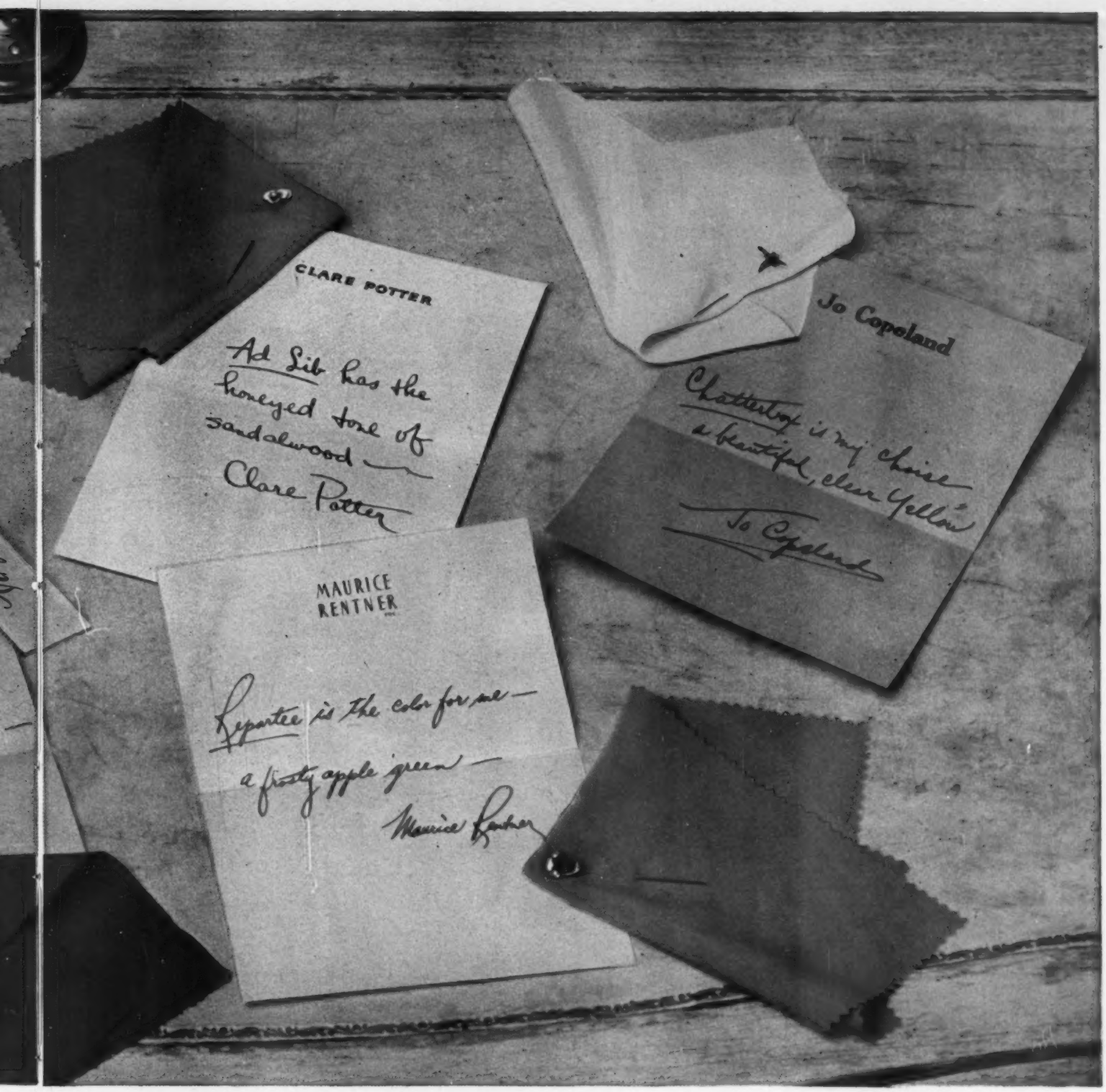
CLARE POTTER
Ad Lib has the honeyed tone of sandalwood —
Clare Potter
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Chatterbox is my choice — a beautiful, clear Yellow
Jo Copeland
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Spring 1948

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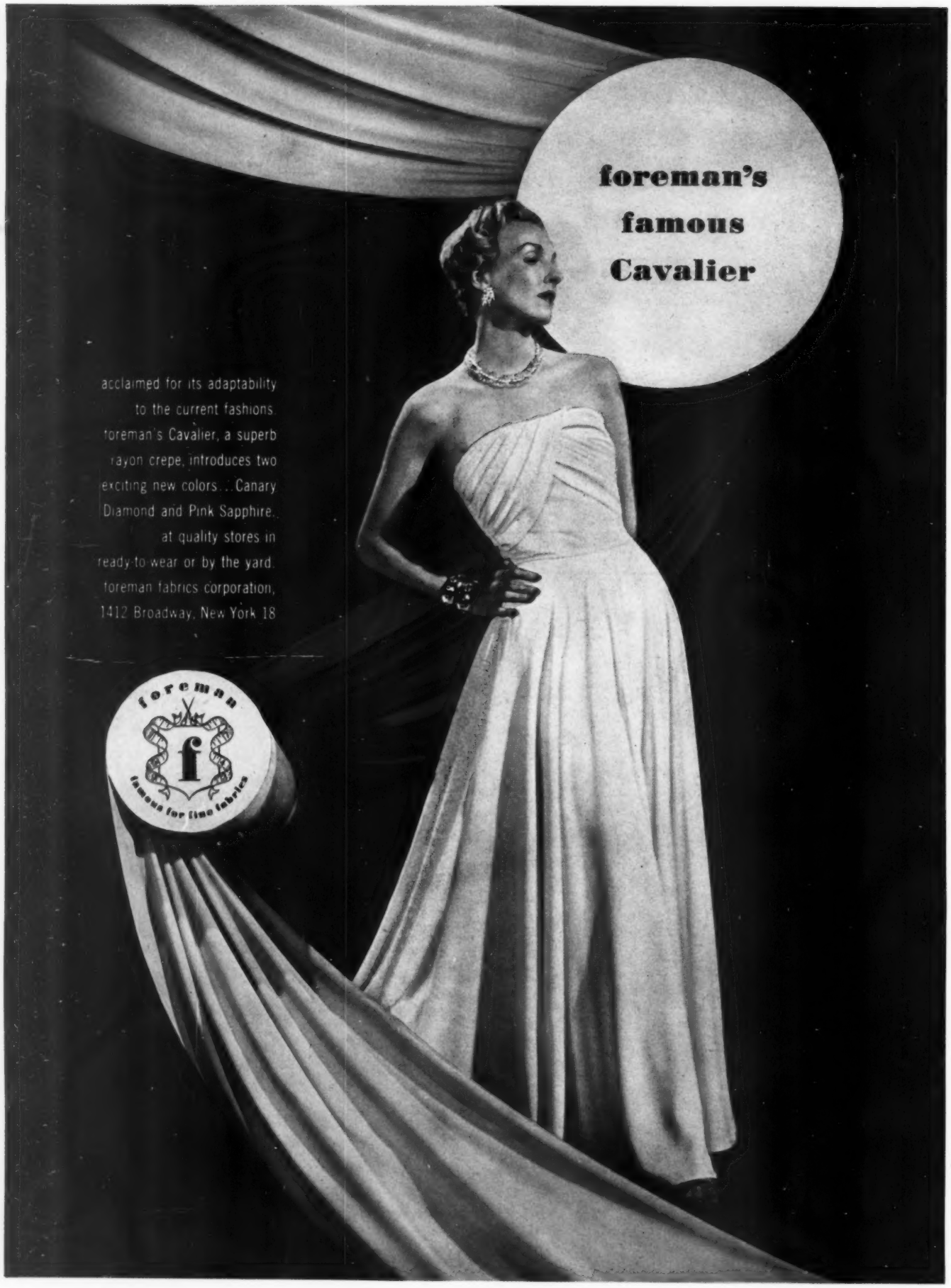
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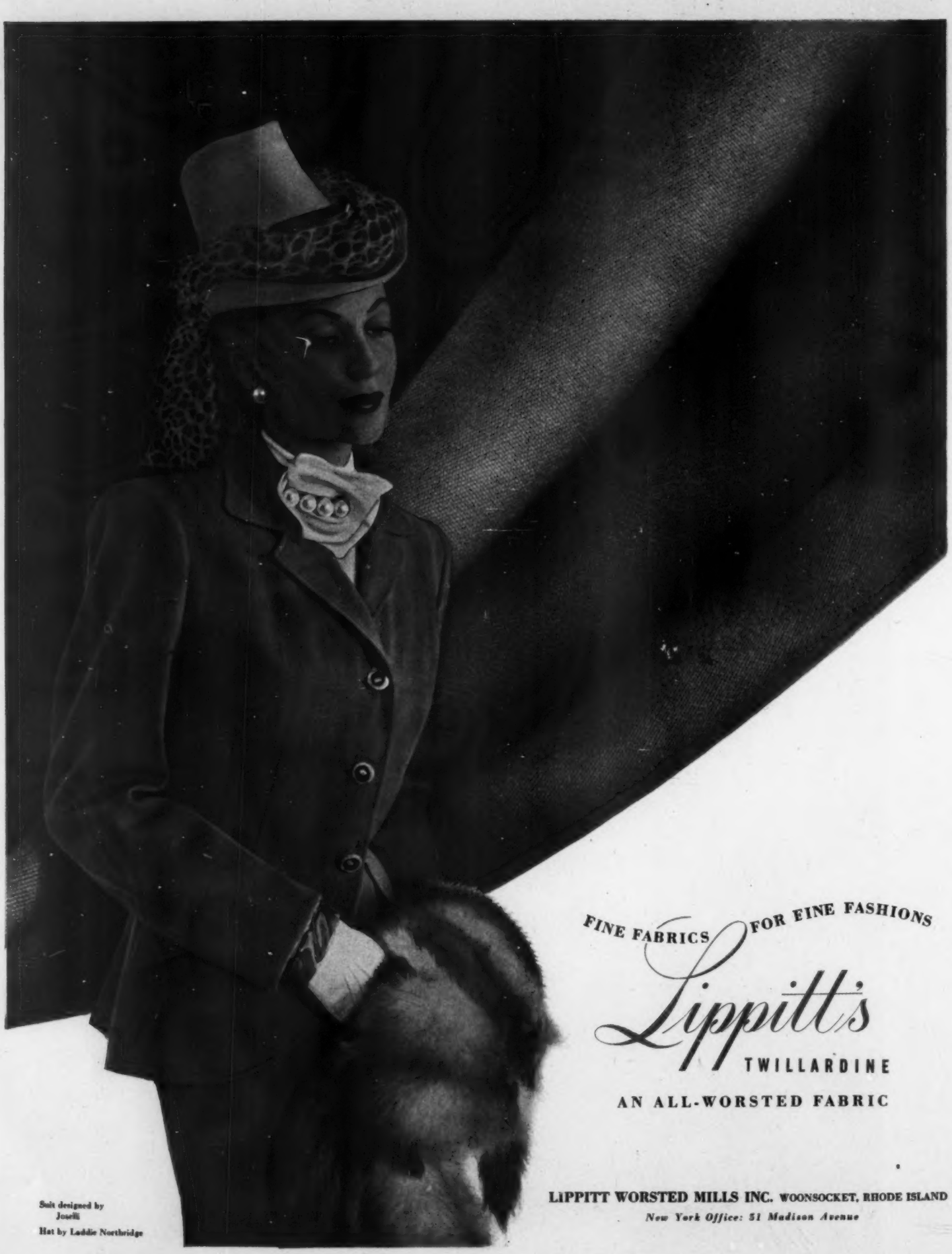

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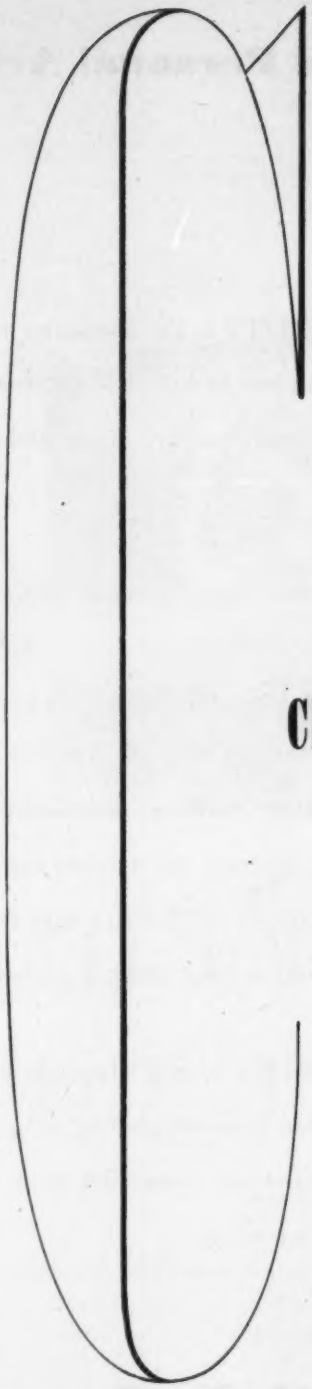

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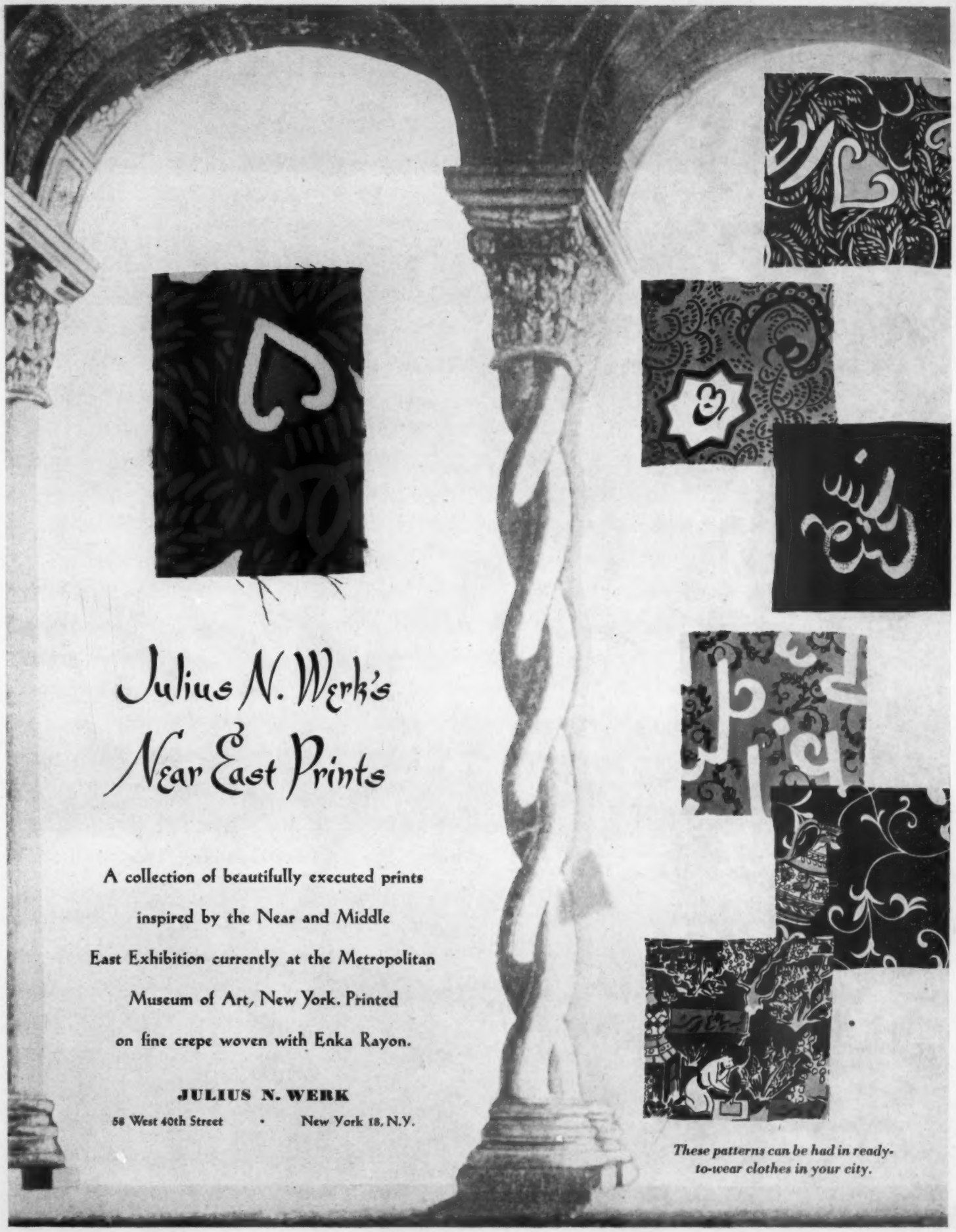
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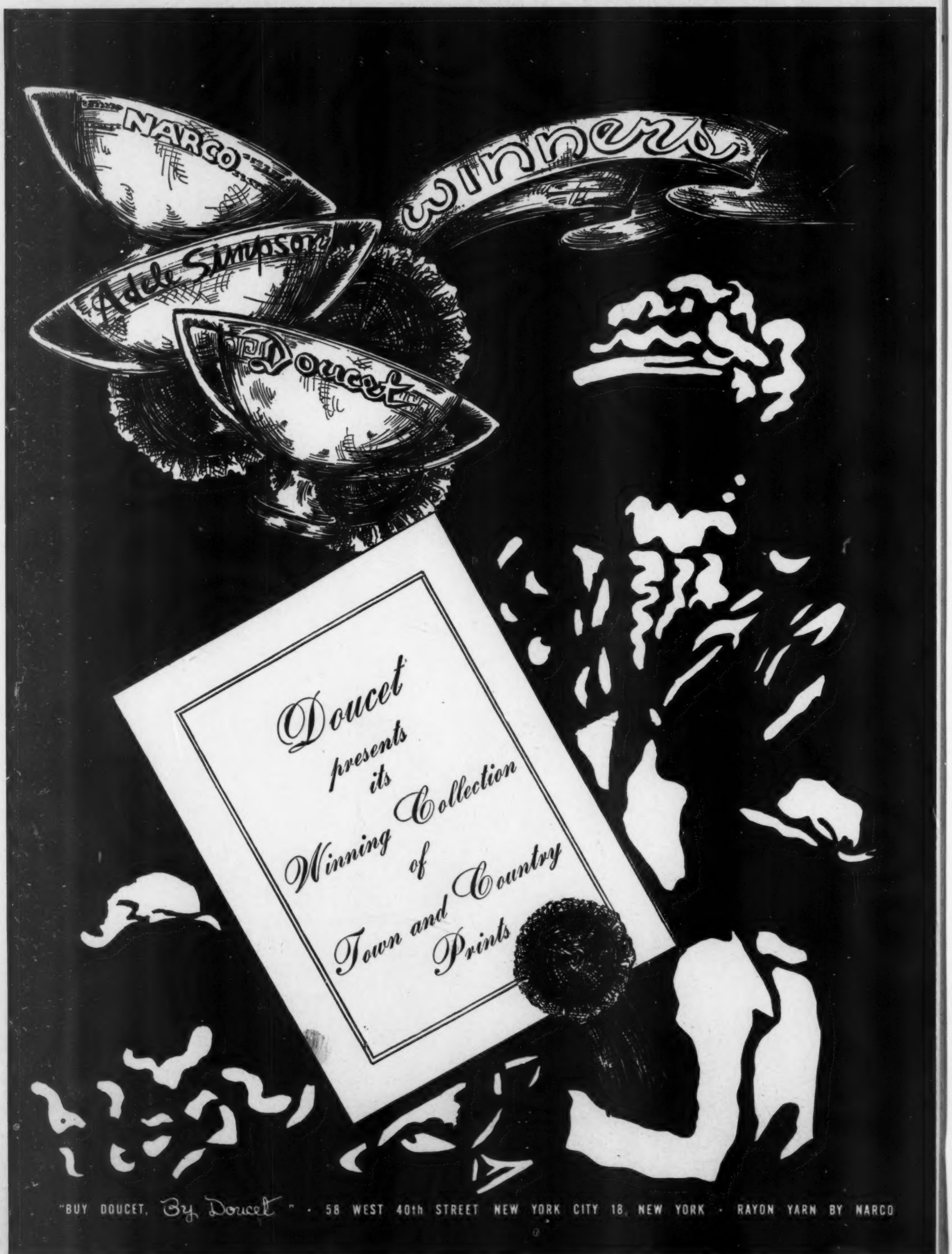
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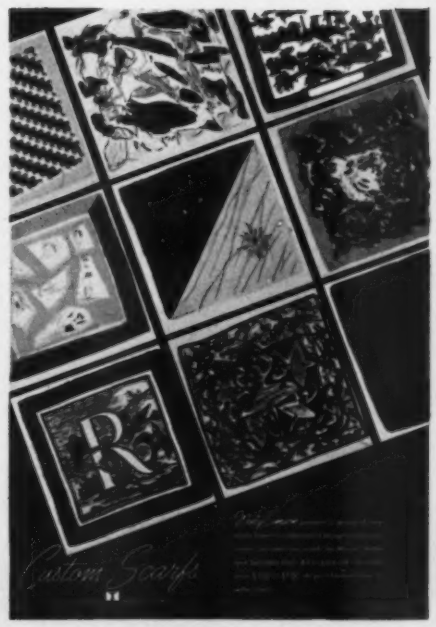

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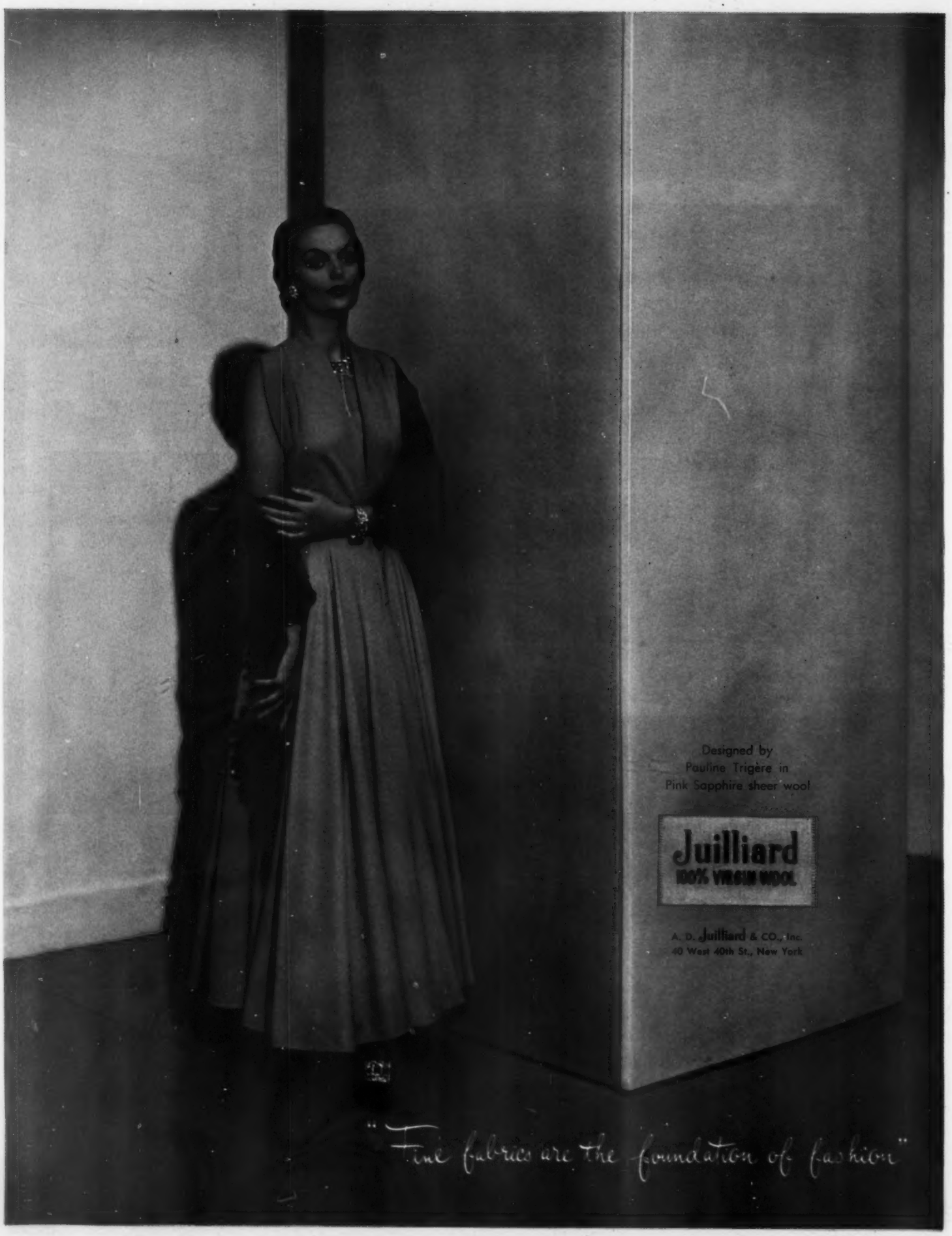
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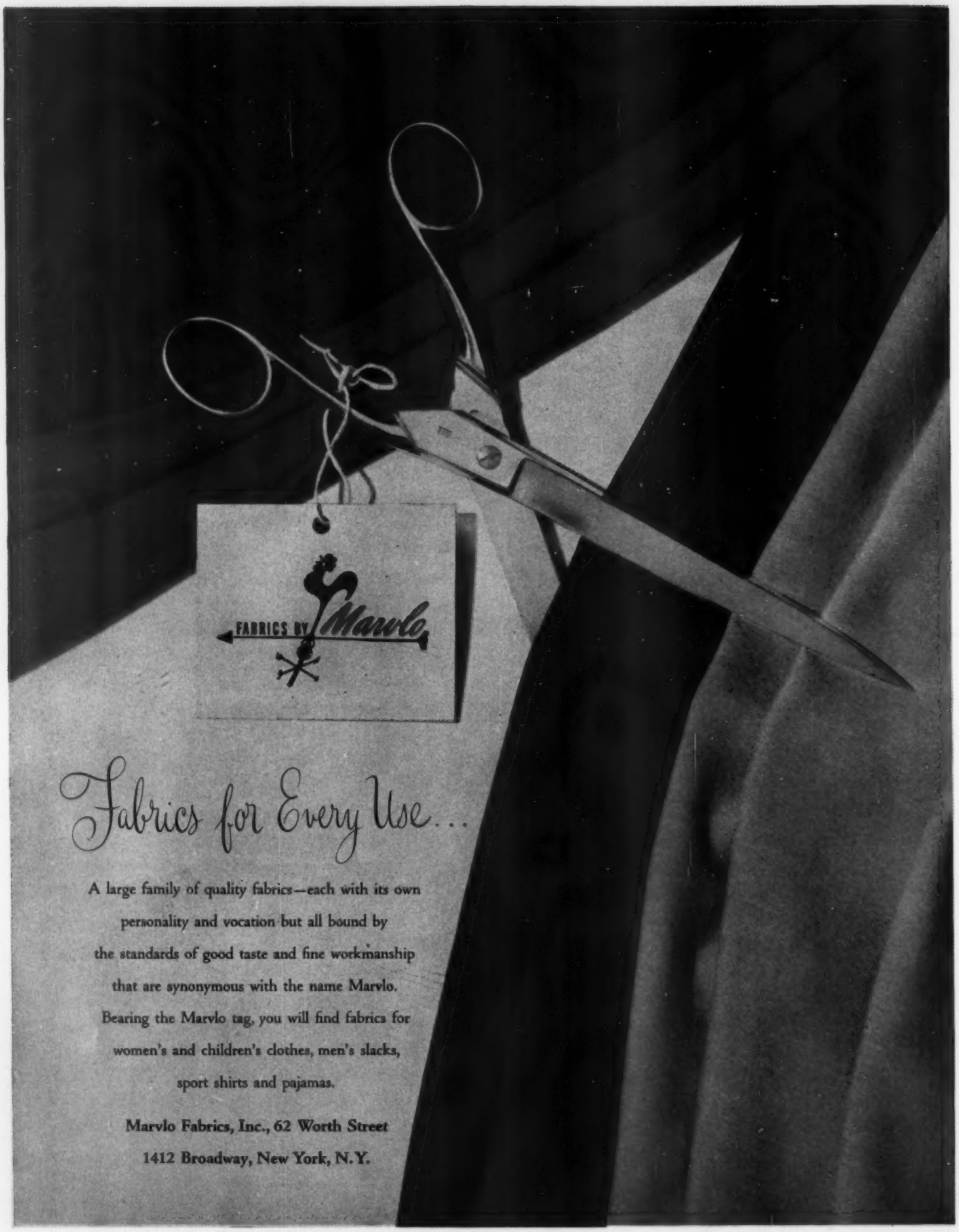

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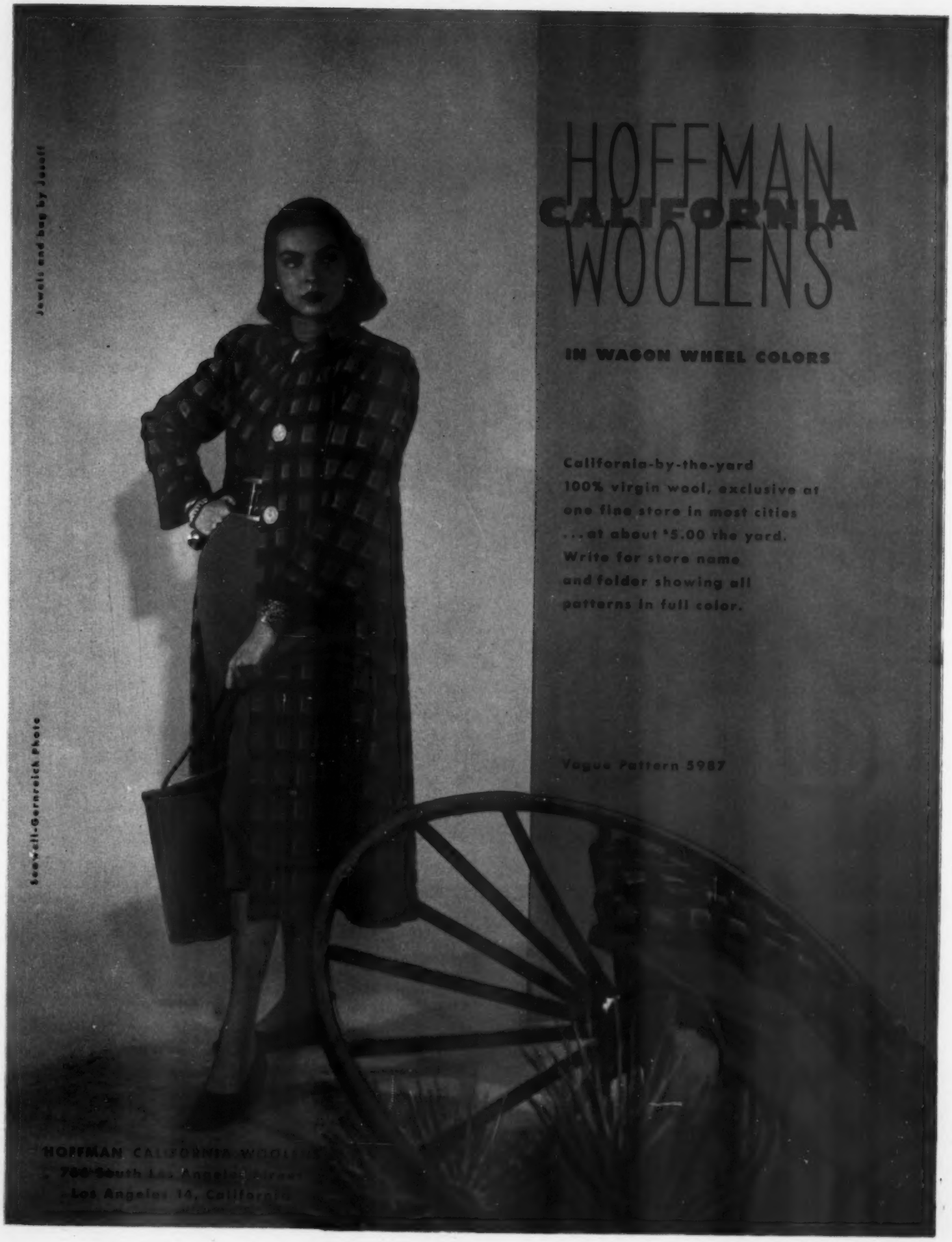
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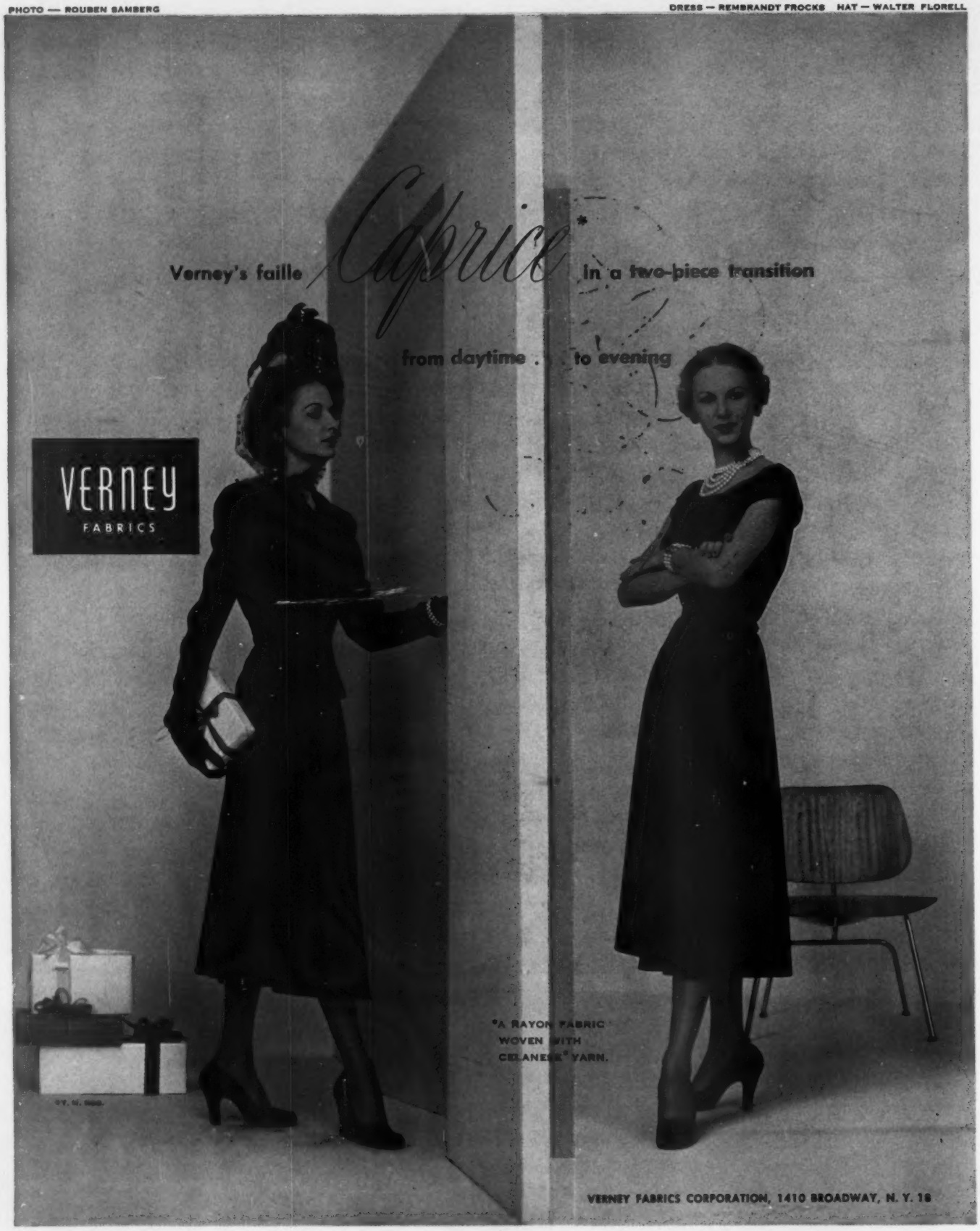

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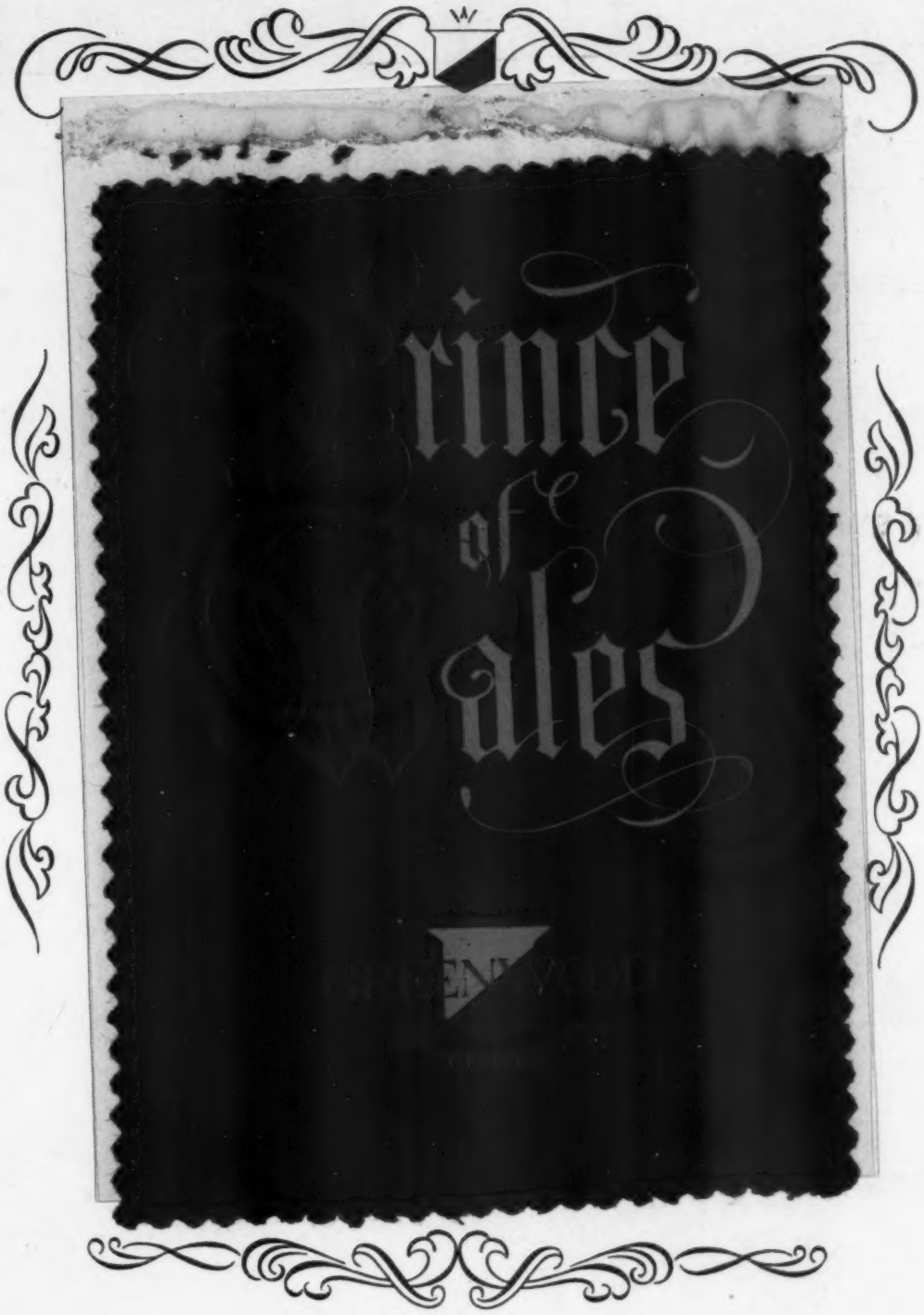

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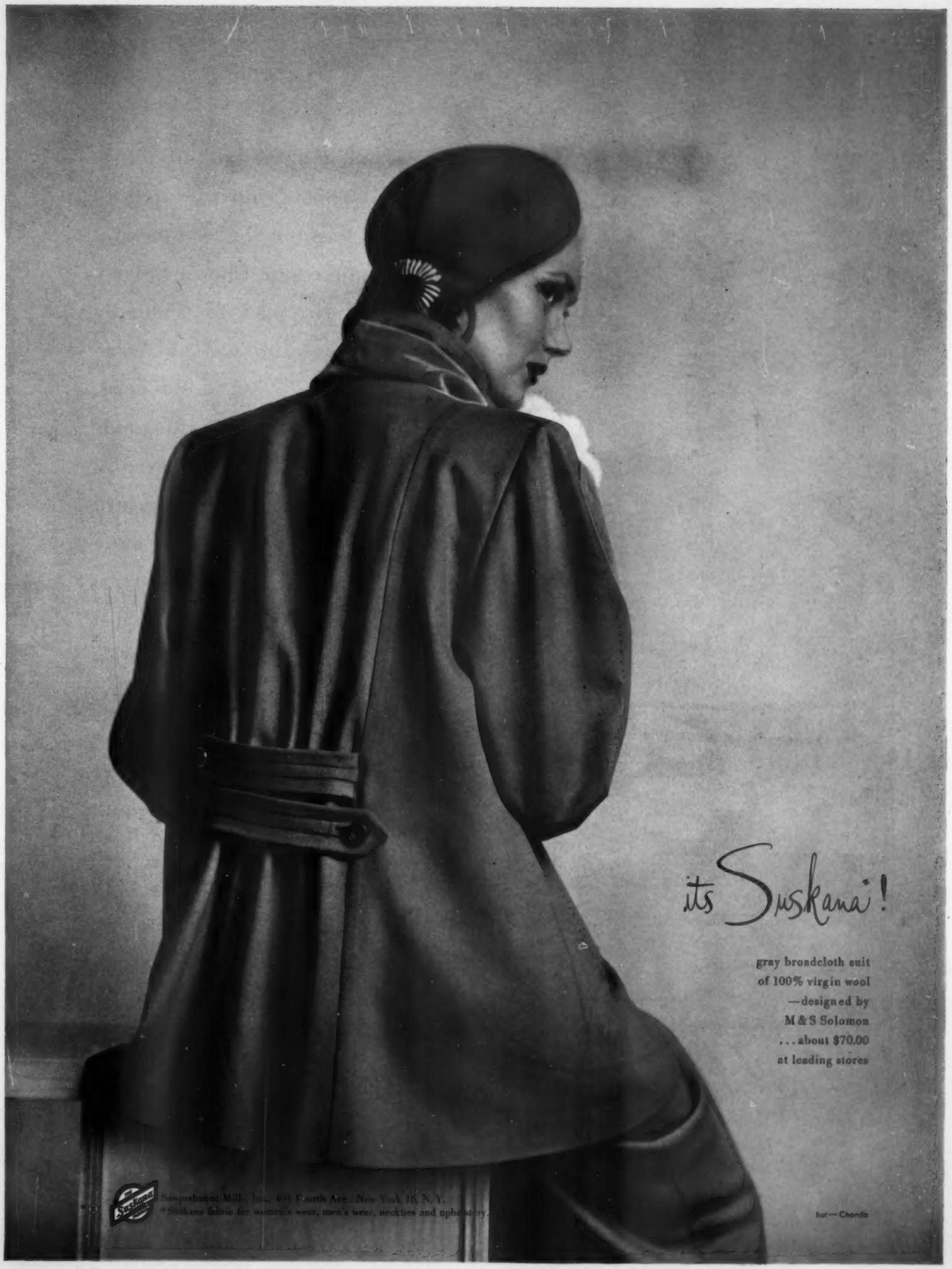
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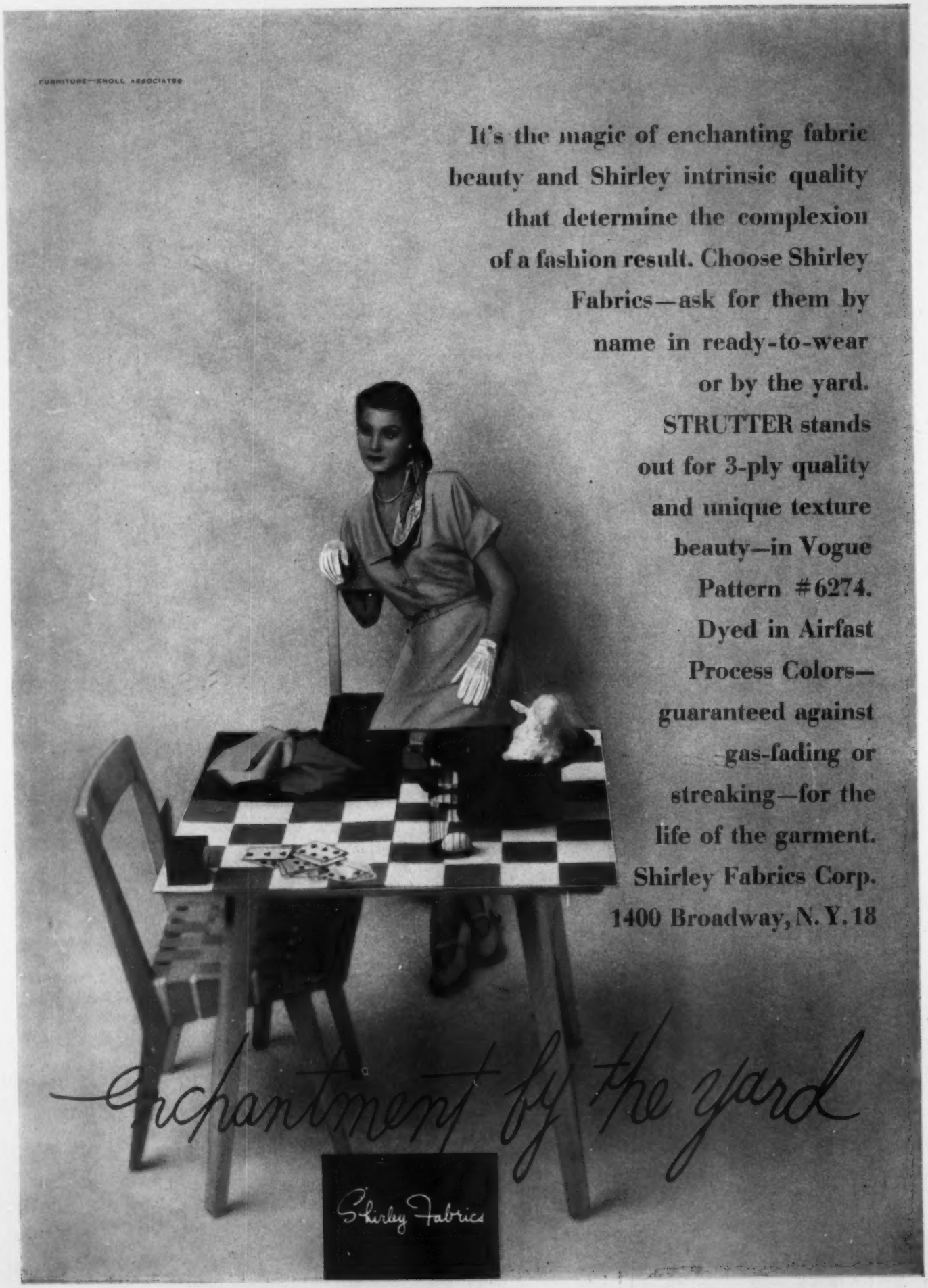
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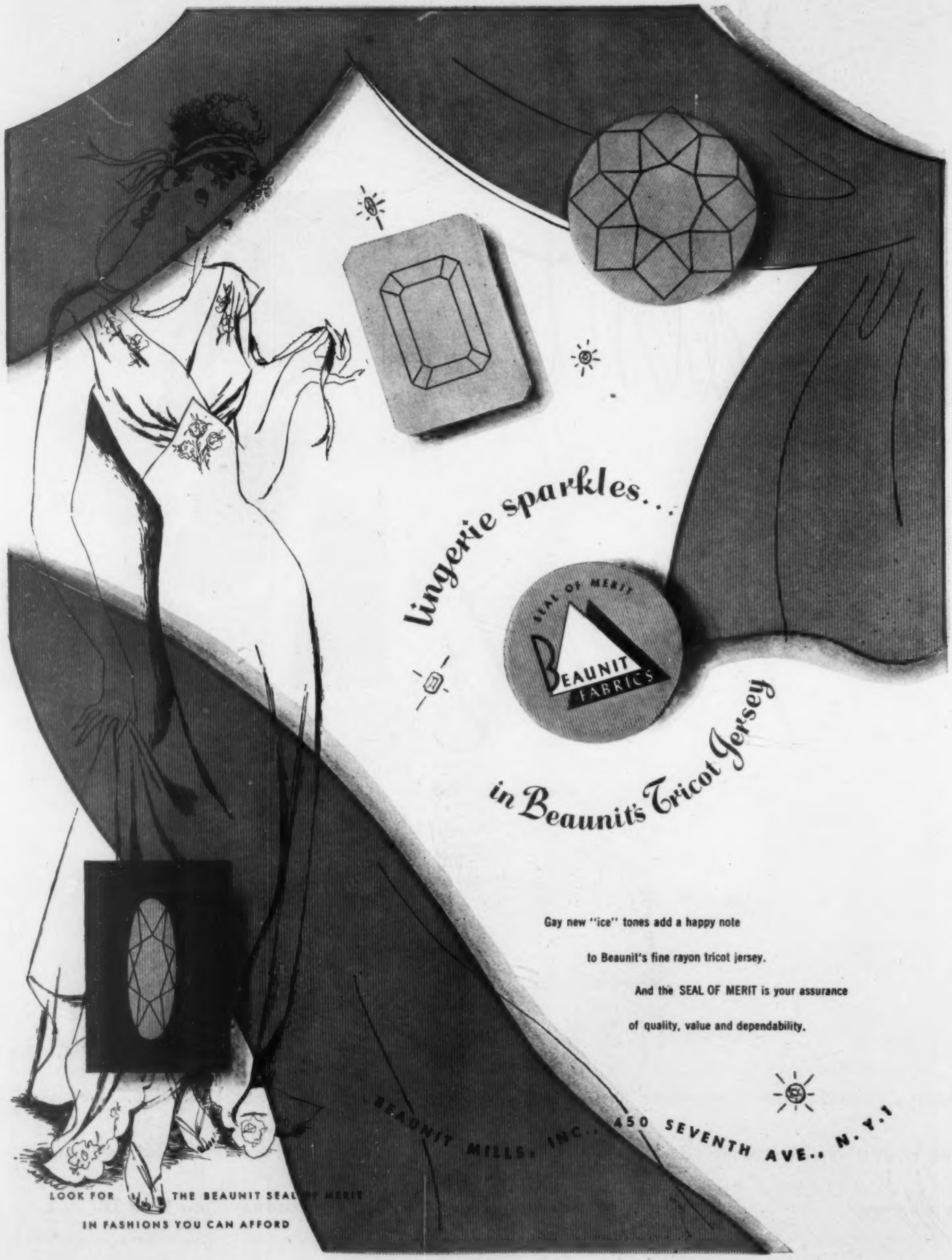
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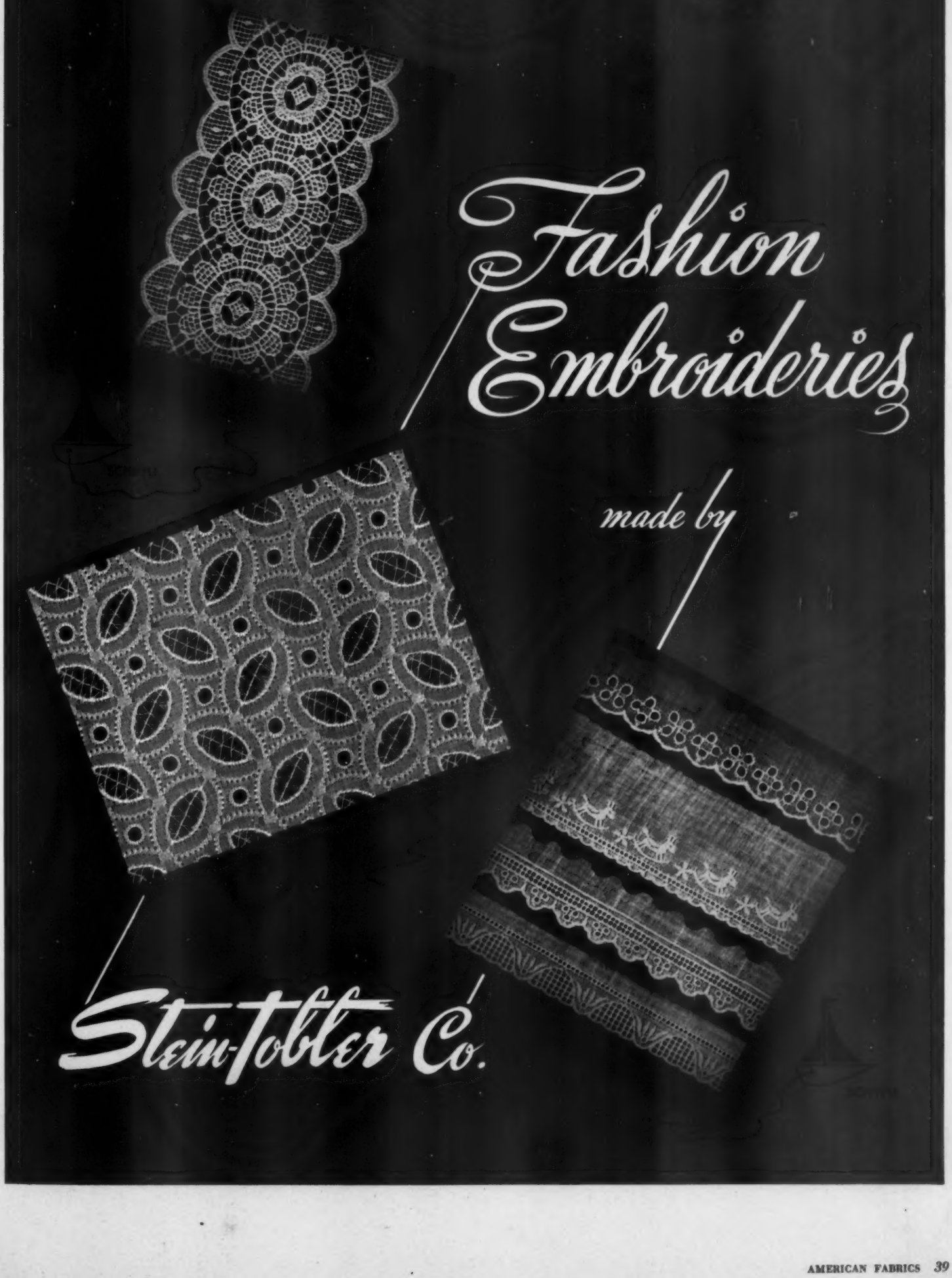
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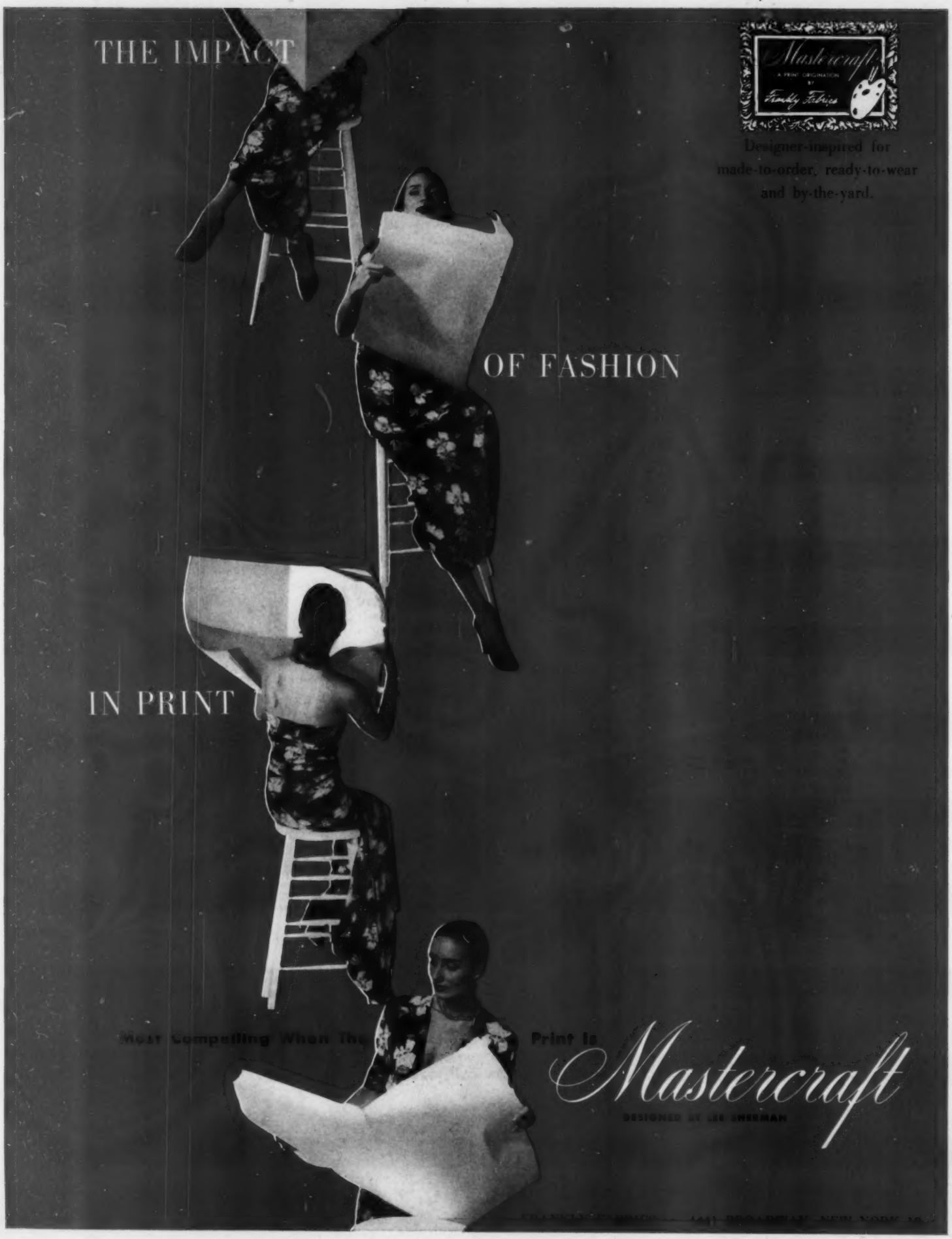
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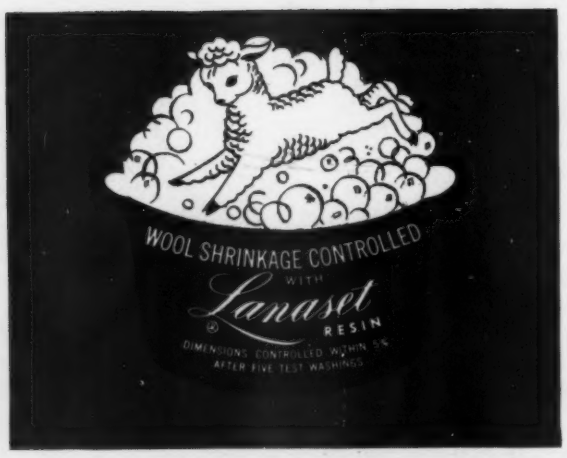

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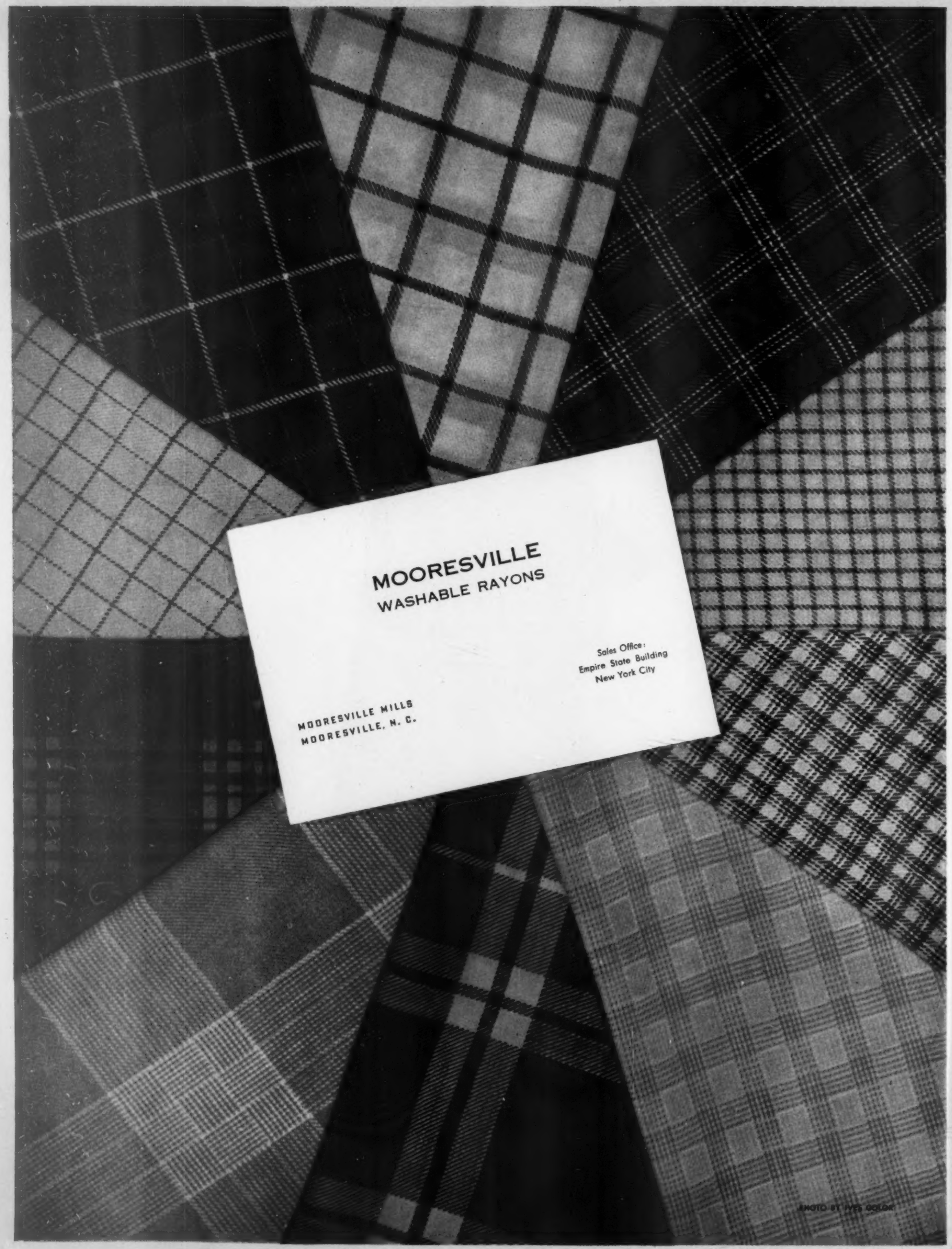
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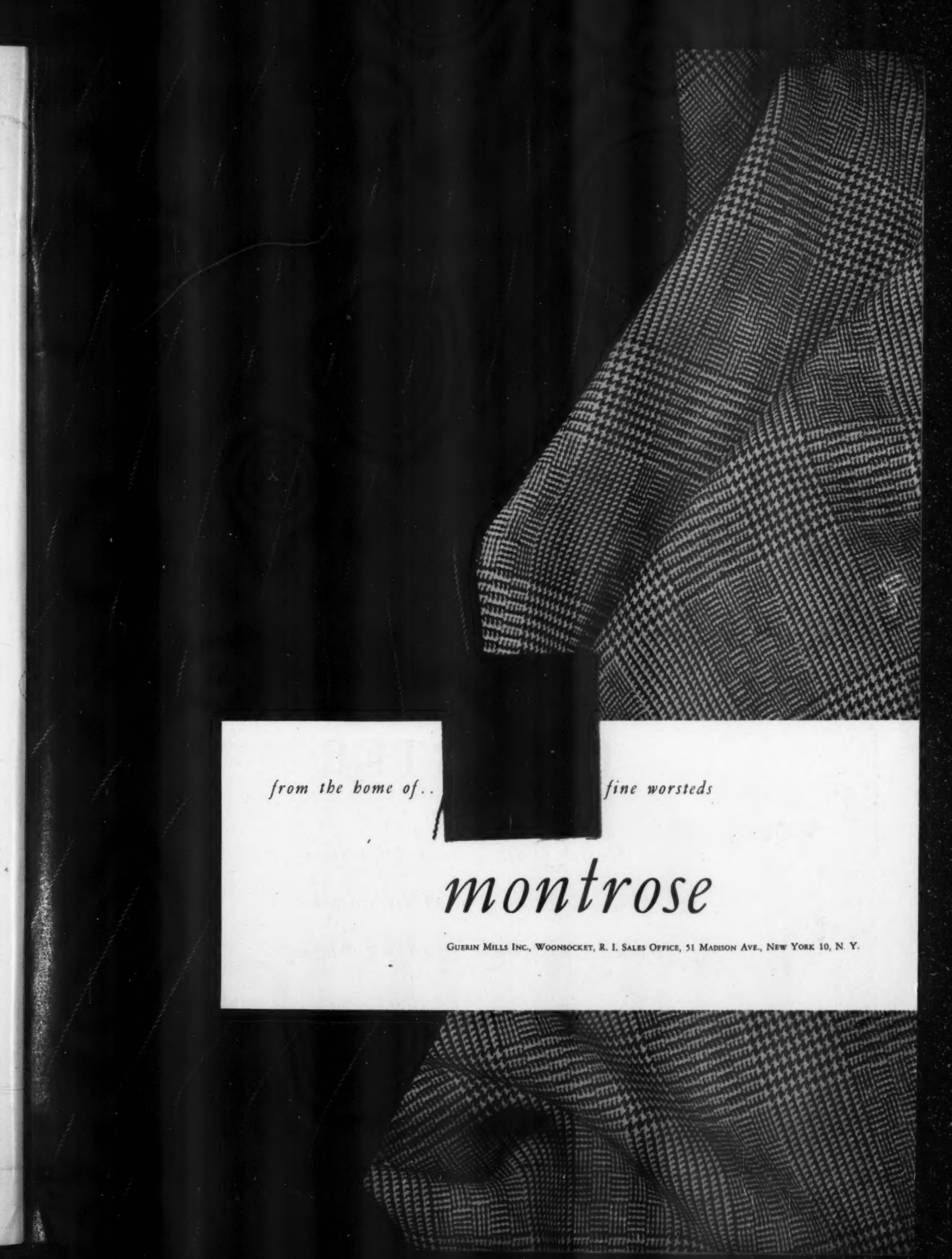
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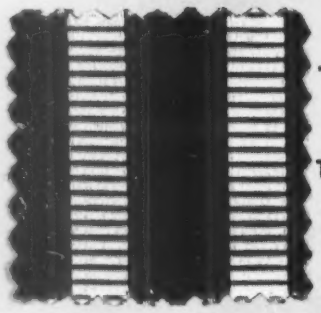

STUDENTS FROM THE TRAPHAGEN SCHOOL OF TEXTILES
...examine a few of the many fabulous Scalamandré brocades which were recently exhibited at The Scalamandré Museum of Textiles, 20 West 55th Street, New York, N.Y.

Through his Museum, Scalamandré encourages textile students to appreciate the importance of preserving *The Fine Art of Weaving*, a skill of The Old Masters, for which The House of Scalamandré has achieved international fame. When speaking of incomparable decorative fabrics, one always says, *"Scalamandre, of course."*

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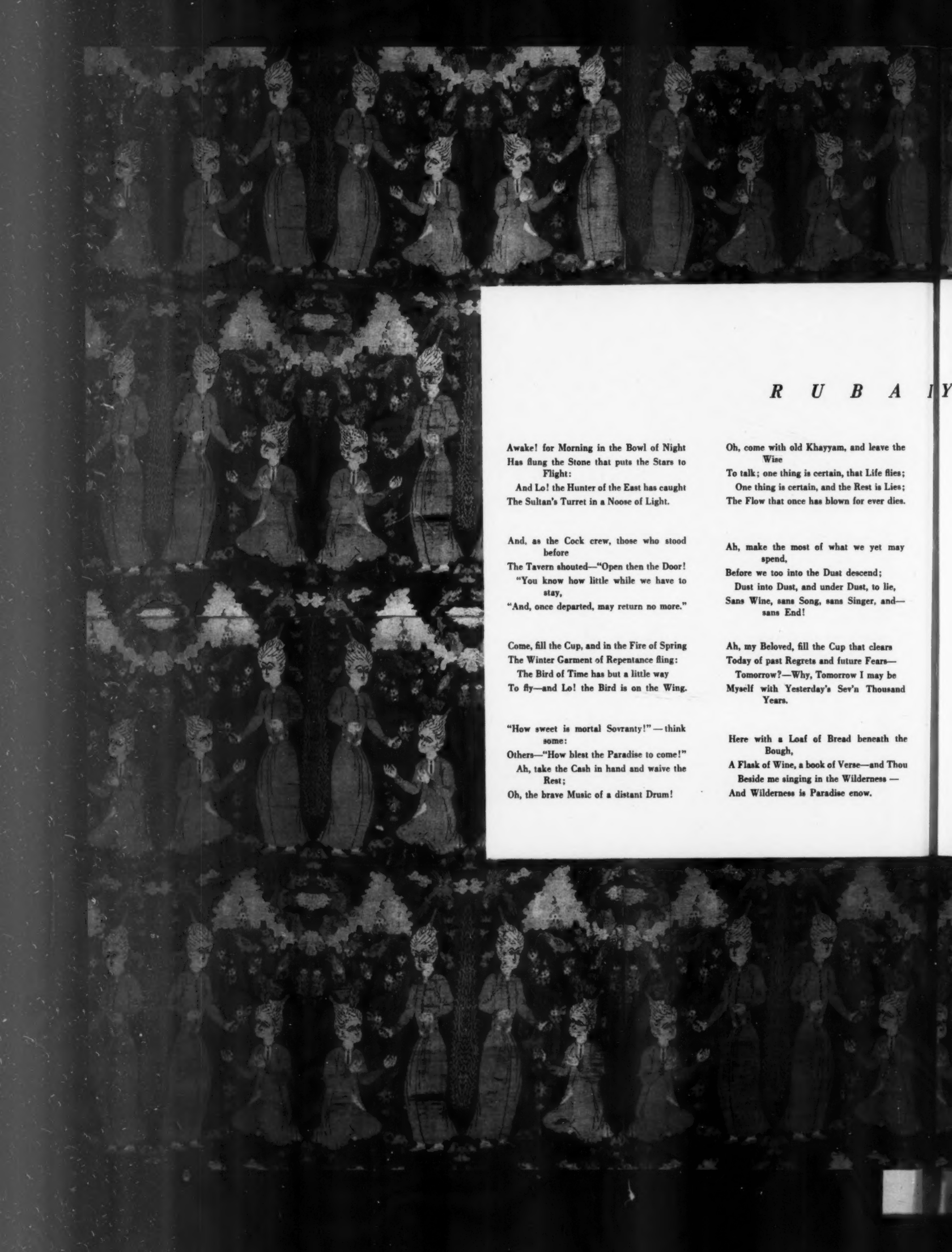
American Fabrics

METROPOLITAN MUSEUM OF ART'S NEAR AND MIDDLE EAST EXHIBITION PRESAGES COMING TRENDS . . .



R U B A I Y

Awake! for Morning in the Bowl of Night
Has flung the Stone that puts the Stars to Flight:
And Lo! the Hunter of the East has caught
The Sultan's Turret in a Noose of Light.

And, as the Cock crew, those who stood before
The Tavern shouted—"Open then the Door!
"You know how little while we have to stay,
"And, once departed, may return no more."

Come, fill the Cup, and in the Fire of Spring
The Winter Garment of Repentance fling:
The Bird of Time has but a little way
To fly—and Lo! the Bird is on the Wing.

"How sweet is mortal Sovranty!"—think some:
Others—"How blest the Paradise to come!"
Ah, take the Cash in hand and waive the Rest;
Oh, the brave Music of a distant Drum!

Oh, come with old Khayyam, and leave the Wise
To talk; one thing is certain, that Life flies;
One thing is certain, and the Rest is Lies;
The Flow that once has blown for ever dies.

Ah, make the most of what we yet may spend,
Before we too into the Dust descend;
Dust into Dust, and under Dust, to lie,
Sans Wine, sans Song, sans Singer, and—sans End!

Ah, my Beloved, fill the Cup that clears
Today of past Regrets and future Fears—
Tomorrow?—Why, Tomorrow I may be
Myself with Yesterday's Sev'n Thousand Years.

Here with a Loaf of Bread beneath the Bough,
A Flask of Wine, a book of Verse—and Thou
Beside me singing in the Wilderness—
And Wilderness is Paradise enow.

I Y A T . .

Myself when young did eagerly frequent
Doctor and Saint, and heard great Argument
About it and about: but evermore
Came out by the same Door as in I went.

With them the Seed of Wisdom did I sow,
And with my own hand labour'd it to grow:
And this was all the Harvest that I reap'd—
"I came like Water, and like Wind I go."

Into this Universe, and why not knowing,
Nor whence, like Water willy-nilly flowing:
And out of it, as Wind along the Waste,
I know not whither, willy-nilly blowing.

Think, in this batter'd Caravanserai
Whose Doorways are alternate Night and Day,
How Sultan after Sultan with his Pomp
Abode his Hour or two, and went his way.

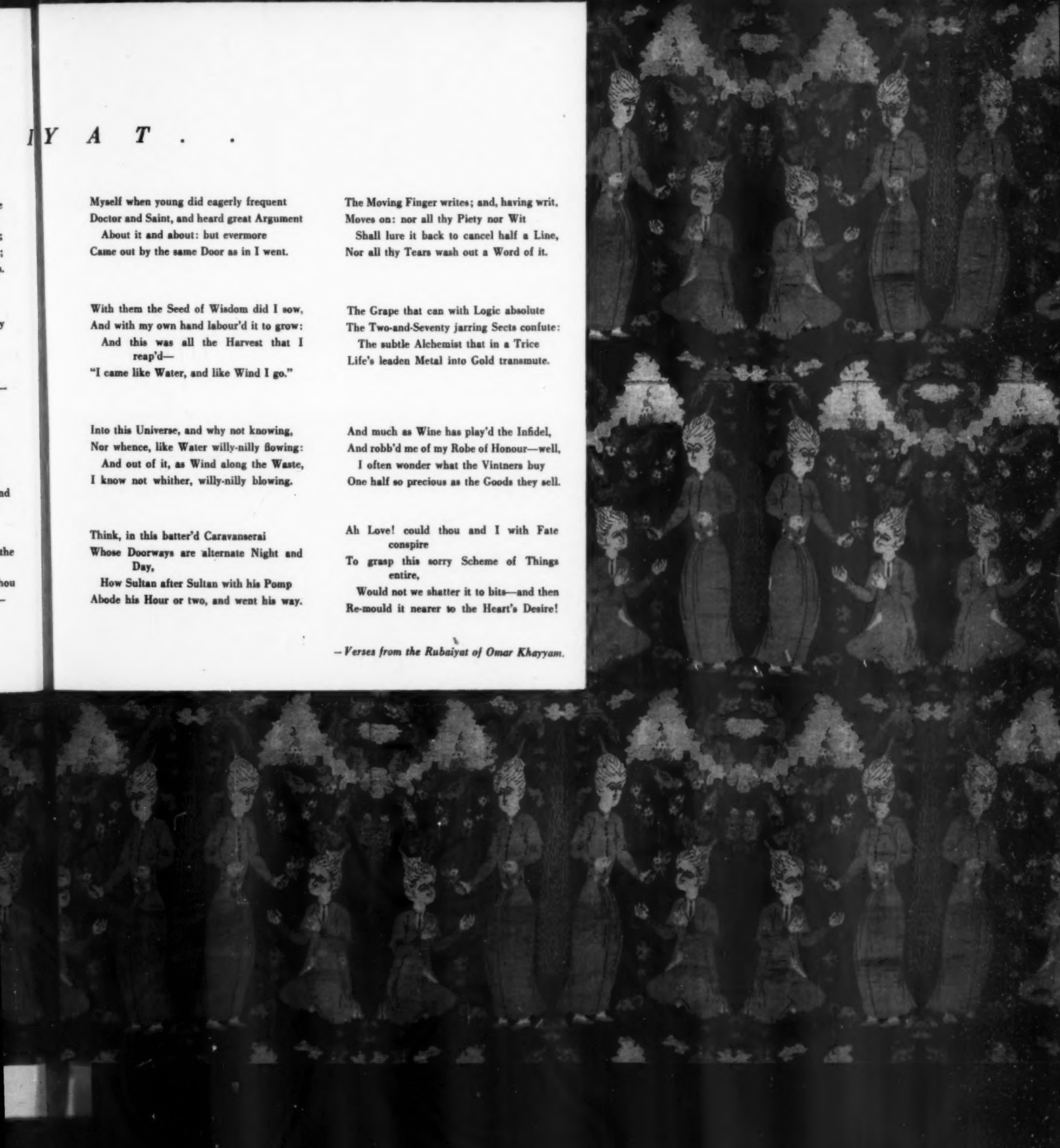
The Moving Finger writes; and, having writ,
Moves on: nor all thy Piety nor Wit
Shall lure it back to cancel half a Line,
Nor all thy Tears wash out a Word of it.

The Grape that can with Logic absolute
The Two-and-Seventy jarring Sects confute:
The subtle Alchemist that in a Trice
Life's leaden Metal into Gold transmute.

And much as Wine has play'd the Infidel,
And robb'd me of my Robe of Honour—well,
I often wonder what the Vintners buy
One half so precious as the Goods they sell.

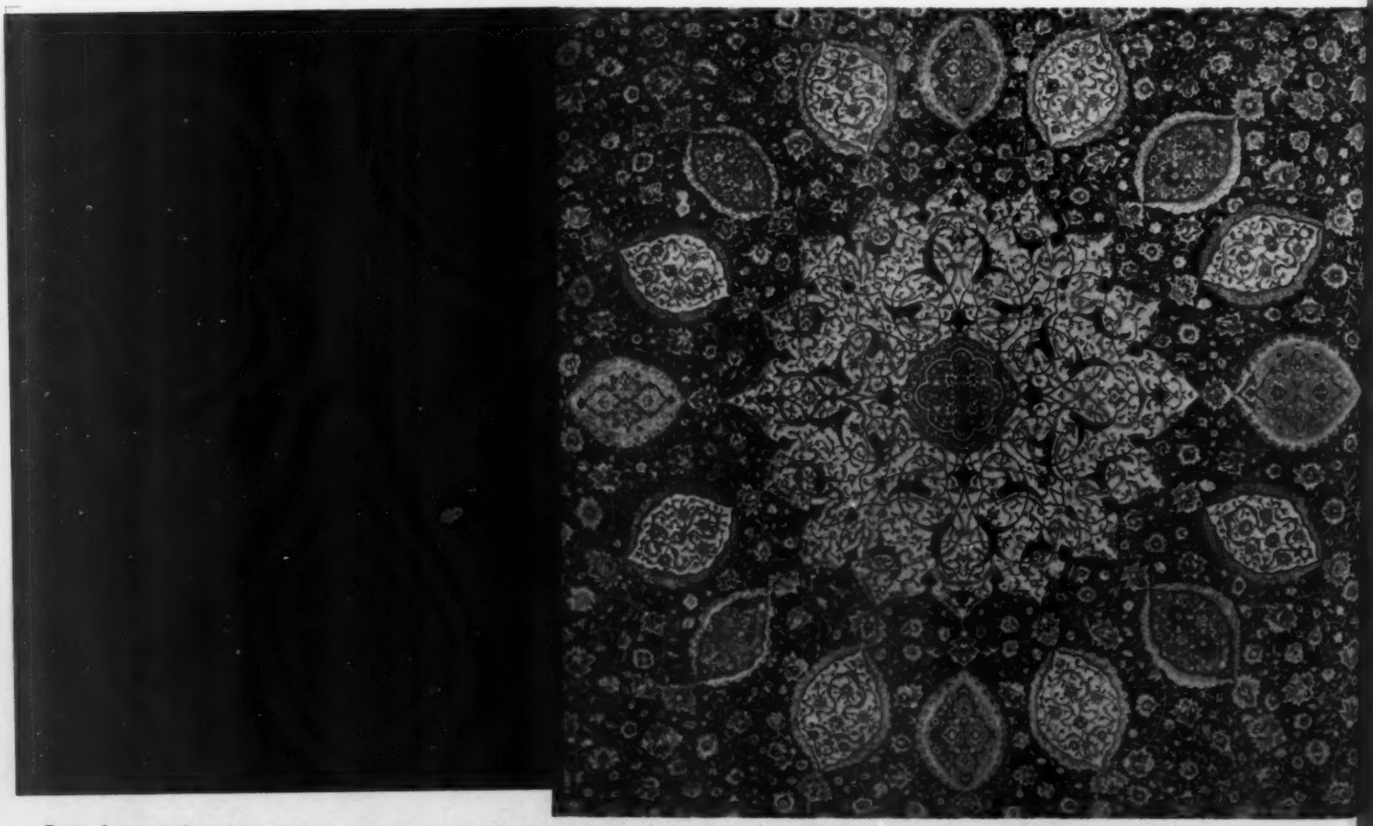
Ah Love! could thou and I with Fate conspire
To grasp this sorry Scheme of Things entire,
Would not we shatter it to bits—and then
Re-mould it nearer to the Heart's Desire!

—Verses from the Rubaiyat of Omar Khayyam.



The graceful flower motif appears on both 17 century glazed ceramic and on 18th century satin.

CHIEF CHARACTERISTIC OF NEAR EASTERN CREATIONS WAS A STRONG FEELING OF UNITY IN DESIGN



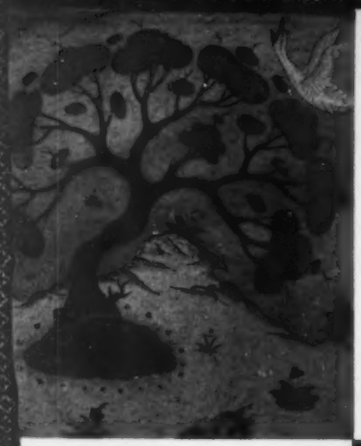
Basic design (adapted in 1945 by Cadwallader for Nettie Rosenstein gown) appears on Mesopotamian Vase and XVI century rug.

The graceful palmette motif, used in countless variations, appears on Turkish ceramic and on Isfahan silk.

. . . the arts and crafts of the Near East were never far apart from each other: artists and artisans, sculptors and manuscript-writers, pottery makers and weavers very often employed the same basic motifs . . . adding and delineating each in his own way . . . constantly enriching the arts and crafts of their basic culture.

— Photos courtesy Metropolitan Museum of Art and Asia Institute

The famous XVIII century silver brocade design finds its counter part in the 18th century Safavid shirt.



A Tree detail from a Persian miniature becomes the main motif of an American fabric.

Centuries old linen with fascinating checkerboard lion inspires a modern warp print.

This graceful example of the potter's art offers designers a series of ideas.

Detail from a Calcutta cushion cover is transformed into a woven Jacquarded fabric.

The fragment of the embroidery inspires a satin Jacquard by a noted American maker.

A sleeve detail from a Near East garment is grist for modern American designers.

The fantastic horse on a Persian ceramic is translated into a fresh modern motif.

This imaginative and very beautiful design — heads of sacred bulls is choice of a leading American designer.

American Fabrics, since its inception, has advocated a closer relationship between the Arts and Industry

THE METROPOLITAN MUSEUM'S

NEAR AND MIDDLE EAST EXHIBIT

marks an important milestone in integration of great historical art and contemporary American design

ART OF THE NEAR AND MIDDLE EAST AND IT'S INFLUENCE IN THE MODERN WORLD....

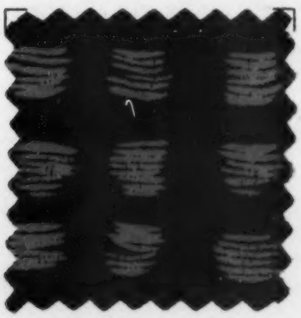
Symbol of a vivid enthusiasm for the art forms of an ancient civilization in contemporary culture is the Metropolitan Museum of Art's dramatic exhibit themed to the fusion of East and West. The exciting contrast of ancient and fabulous treasures against the modern textiles they have inspired is most illuminating both for the student and the professional in the allied worlds of design, fashion and textiles. Spurred on by this exhibit, there is more than a chance that the traditional "tree of life" will again ripen and bear fruit in a full-blown current trend.

There is nothing strange in this possibility. The West has always found inspiration in the rich culture of the East. In literature, the romance of the East catches the child early. There is the first fascination with "One Thousand and One Nights" . . . the school-boy excitement in the pages of Sir Walter Scott's "Ivanhoe" . . . the adult pleasure in the sensual beauty of the Rubaiyat.

In our dress we are no different. A man reaches for a Paisley four-in-hand for his favorite sports jacket without realizing that the design comes from the Sasanian hunting fabrics with their palmette leaf motifs. A woman wears a cocktail turban without thinking that this luxurious headgear was first fashionable in Persia during the time of Shah Tahmasp (16th century). The rugs we walk in . . . the plates we eat from — all attest to the influence of the Near East which has never been eclipsed in the West. It merely rises and falls in recurrent waves and it has been so ever since the Crusades of the 11th Century.

And no wonder! Under the banners of Mohammed, a force sprang up which once extended its influence from Spain and the Atlantic coast of Africa to the borders of China., Conquests by the sword and book brought drastic (*please turn page*)

Headdress from Metropolitan Museum of Art's Costume Institute.



Algerian headdress interpreted by contemporary American textile makers — Stroock and Chauvin . . . both Chauvin's silk print and Stroock's superb double-weave checkerboard wool, shown with costume design by Adele Simpson on opposite page, faithfully render the design, color and feeling of the headdress.

A XIII century Persian lustre bowl in the Metropolitan Museum of Art's collection. . .

D. D. and Leslie Tillett do overprint stripes in peacock and royal, on all-worsted Milliken fabrics.

Near and Middle Eastern Influence (*cont.*) changes to kingdoms of both the East and the West. Semi-united under the impact of a dominant religion, these diverse races and nations began to develop a homogeneous culture, mingling and exchanging their art forms. Egyptian fabrics traveled to Spain . . . Indian textiles to Egypt . . . with Iran as the pivotal center.

In common with so many other conquerors in history, the Arabs had little or no art of their own when they began their "world conquest." But as country after country fell to their grasp, an individual style was gradually evolved. It was drawn from two chief sources — the East Christian (Coptic) and the Sasanian. From the Copts, the Mohammedans adapted the *acanthus* design and the *vine*, combined with geometric motifs or interlacings. Even after the conquest, Coptic art flourished, especially in textiles. In its highly developed style, human figures and animals were schematized in oriental fashion, rendered in brilliant flat colors, often against a red background. In a number of Coptic textiles of the Islamic era, Coptic decoration, including Christian figures, is combined with Arabic writing. And this Coptic influence on Islamic Art continued for many centuries — even as late as the eleventh and twelfth.

Again, in the conquest of Persia in 642 A.D., the followers of Mohammed brought their rule to a country where ancient traditions in art were too strong to be obliterated. Indeed it is to the Sasanians that Near and Middle Eastern art is indebted for two of its great motifs — the *palmette* and the *arabesque* with its rhythmic repetition and symmetry which became the characteristic ornaments of the Mohammedans. In connection with the arabesque and its development there is the interesting theory that these abstract designs were not only an expression of rhythmic form, (*please turn page*)

Mirror embroidered trousers and embroidered skirt from far off India . . . and American master weaver Hafner produces the motifs in prints, on self jacquard and superb satin metallic brocades.

From an early XII Century Syrian dish with lustre decoration, Foreman designs a superb contemporary print.

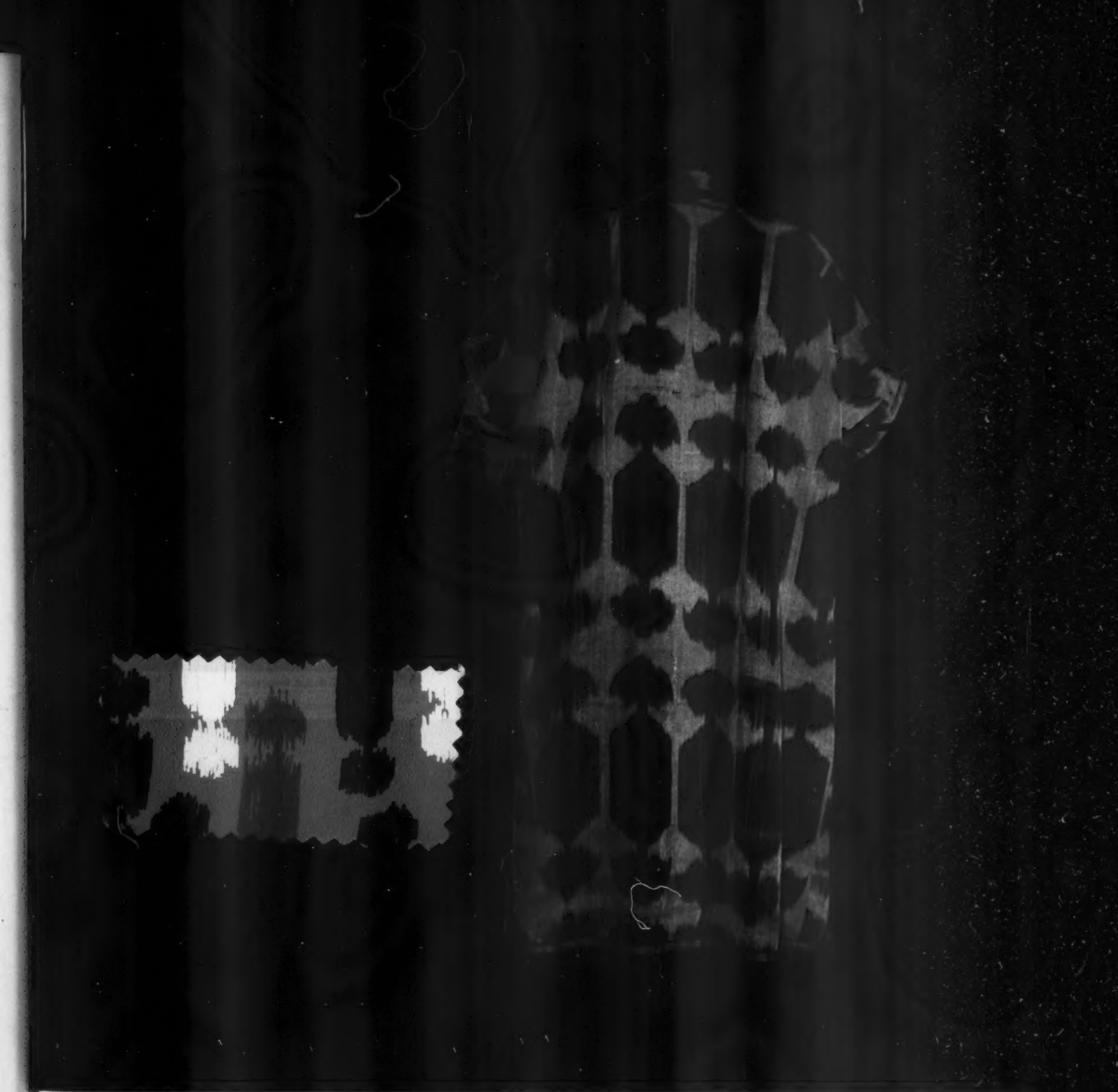
Near and Middle Eastern Influence (*cont.*) but also has philosophical implications; one of these being their use in the development of intellectual concentration and attention.

Another characteristic of the art of the Near East — its use of two dimensions with perspective — owes much to the Persians. Despite the fact that the Koran forbade figural representation, the Mohammedan conquerors never succeeded in suppressing it in Persian art. Animals, birds and humans were merely integrated into the design as a whole in two dimensions. The hunters, the cocks, the elephant and zebu, the dragon with head of a wolf and peacock's tail — all these found a place in ornament, patterned within a circle. The popularity of these designs is readily understood as they were and are perfect for dress materials. Being two-dimensional and conventionalized, they lose nothing of their charm or virility when reduced in size for garment use. And even today, as shown by the Costume Institute's exhibition, they prove an endless source of inspiration for the modern designer.

Sasanian textiles left their impact not only on Near and Middle Eastern art, but through the Mohammedan conquests reached out to influence weaving Europe until far in the thirteenth century. Their forms wrapped the bones of Charlemagne . . . they emerged at Cologne and Ratisbon by way of Byzantium . . . their figures adorn the mosaic floors of early Florentine churches . . . they gave fabulous splendor to the vestments of mediaeval kings and churchmen.

In all history, the textile art of the Near East has no peer. It is its own monument to the power of a great civilization. And in these and following pages, American Fabrics, in collaboration with the Metropolitan Museum's Costume Institute, re-affirms the magnificence of that power. A magnificence reaching out over a thousand years, to enrich our own culture — its textiles and its fashions.

Foreman Fabrics Tree pattern on pure silk from "Rustan Captures His Horse," Persian miniature of the XV Century.



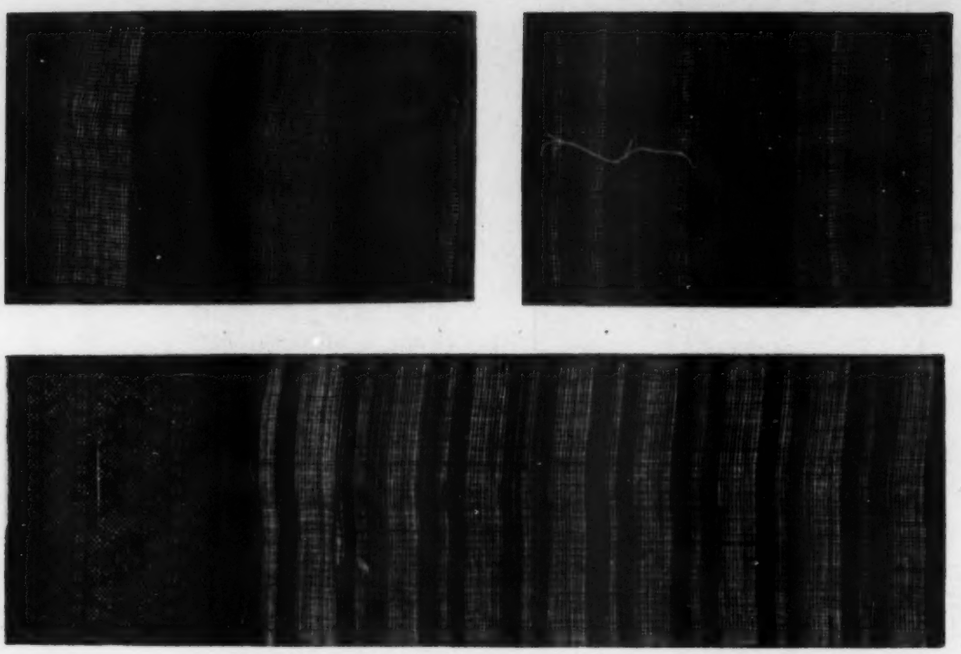
Bourget develops superb modern Enka rayon yarn fabrics from motifs on a Bokharin Chine coat in Costume Institute's collection.

Figures from an Indian cushion cover provide Brooke Cadwallader with a Garden of Love print.

Onondaga's Philip Vogelman takes the classic palmette motif from a Persian printed quilted coat . . . and Adrian designs it into a new American fashion.

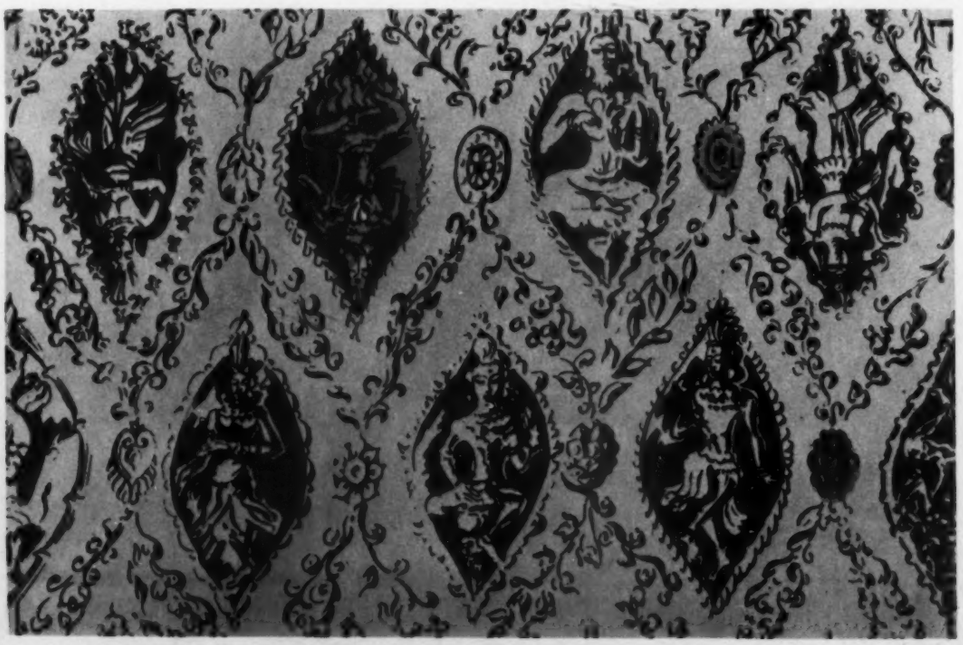
Designer Peter Todd Mitchell's eye is caught by the jeweled pearls in the headdress of the Krishna drawing in the Metropolitan's collection . . . and a Wesley Simpson fashion print is created.

Some seven hundred years old, this lovely enameled glass bottle of Syria provides contemporary inspiration for famed textile maker C. M. Gourdon.

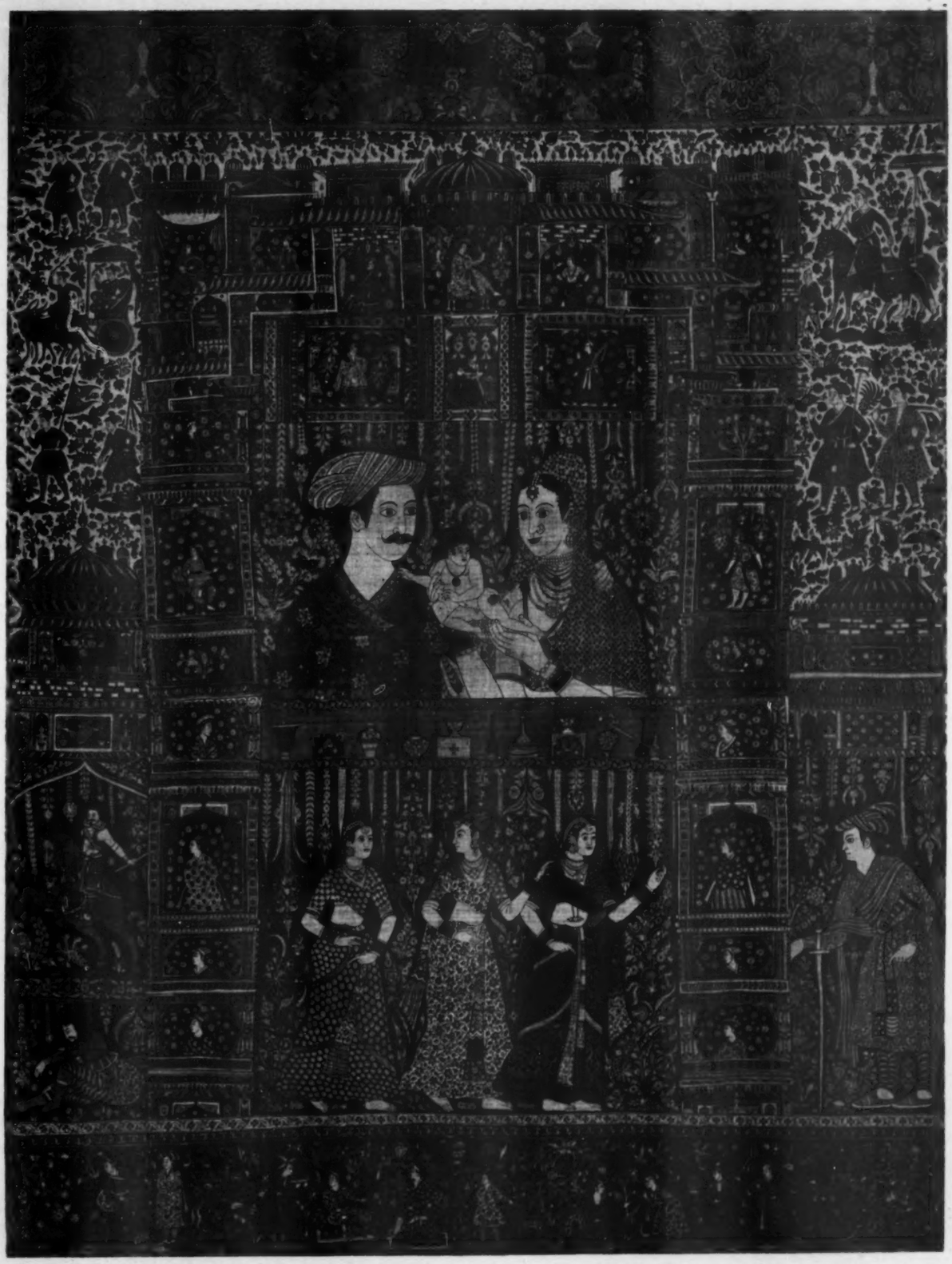


Galey & Lord's Mimi Blaker chooses a collection of fine saris and turbans at the Metropolitan Museum's Costume Institute . . . uses the stripe arrangement and deep colors for Galey & Lord's cotton Lumina stripes . . . and Adele Simpson designs them into cotton frocks for summer 1948.

Celanese's Marjorie Holligan chooses Persian XII century corner tile with lustre decoration for a 1948 Celanese fabric.



Robaix takes a XVI century Turkish brocade, uses the surface arrangement for a modern rayon crepe screened print.



HOW MANY DESIGN POSSIBILITIES CAN YOU FIND IN THIS PAINTED HANGING FROM INDIA?

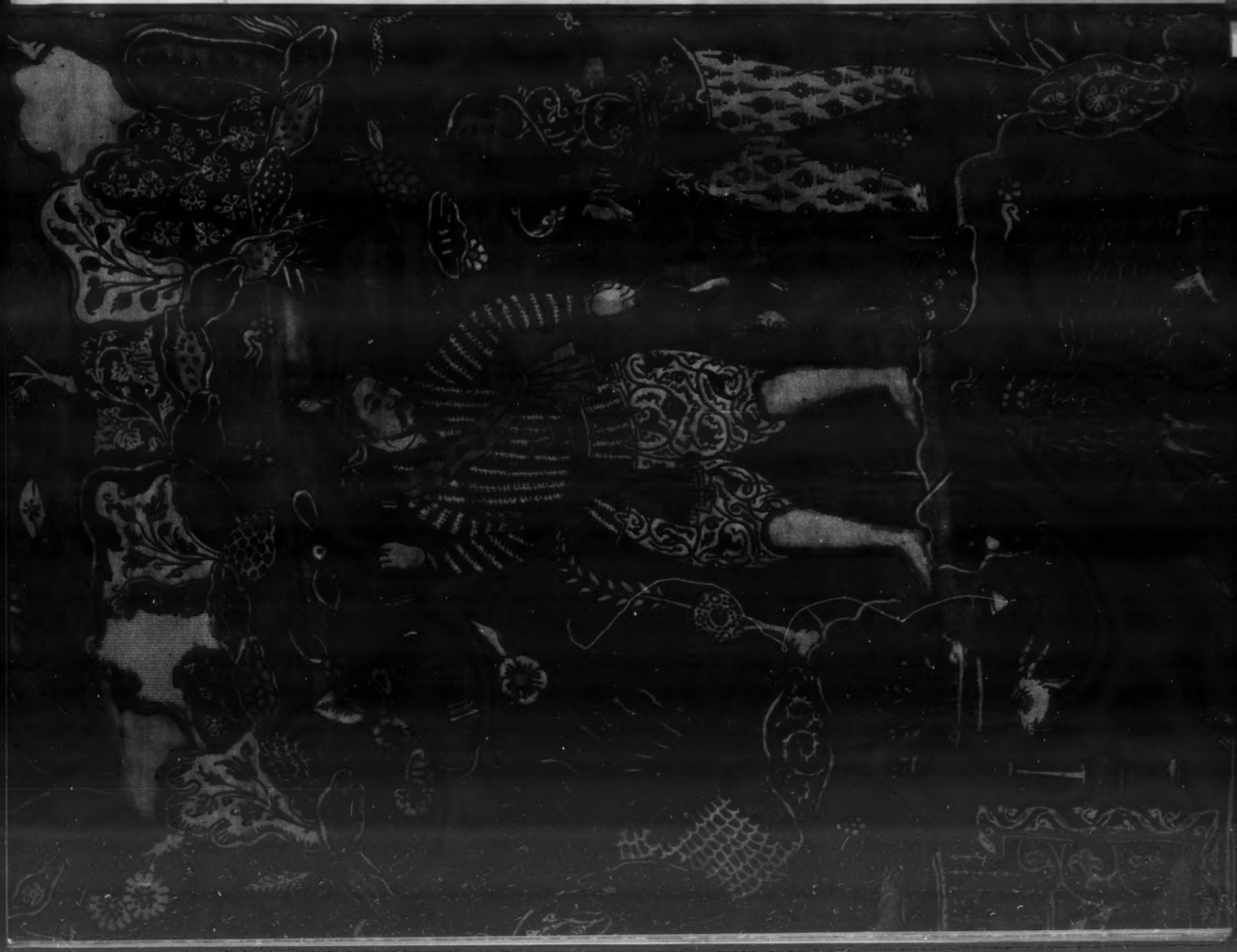
This hanging, typical of the wealth of inspiration which the Metropolitan Museum offers to contemporary designers, is being shown at the Near and Middle East Exhibition. At the Costume Institute, in the same museum, you will also see the original VI century fabric which inspires XX century woolens by J. P. Stevens; the ancient Persian brass horse which results in a Robaix print; the Arabian headdress and Bokhara coat lining from which Remond-Holland designs modern warp prints.

One of the rare examples of Mamluk ware, according to Dr. M. S. Dimand, curator of Near Eastern Art at the Metropolitan Museum, is the XIV Century Mosque lamp which is illustrated. It is decorated with bold, large inscriptions expressing good wishes. The floral motif and fine arabesques are in white, turquoise and pink on black ground. Inscription on the bottom of the lamp gives us the name of the maker: Ibn Al-Gharibi at Tawrizi, the son of the well-known potter, Al Gharibi. Some 500 years after its creation, Julius Werk, American fabric maker is inspired by this rare piece of ancient Mamluk to do a modern silk print for 1948's fashion season.

Notes on the Near and Far Eastern Exhibition. January-April 1948. Arranged in collaboration with the Near Eastern Department of Metropolitan Museum of Art and American textile designers and crafts, the exhibition shows centuries-textiles, costumes and art objects from Persia and other countries including Morocco, Tunis, Algeria, Egypt, Turkey, Syria, Arabia, Palestine, Bulgaria, Yugoslavia, Turkestan and India. Including loans from the Brooklyn Museum, Chicago Art Institute and the Traphagen School, the exhibition was installed under the direction of Miss Frederic Wertheim, executive director of the Costume Institute. ACKNOWLEDGMENT: The editors wish to thank The Metropolitan Museum of Art, The Boston Museum of Art, The Asia Institute and the various American fabric makers for their generous cooperation which has made this issue possible. We are also indebted to Mr. Thomas Lyman for his selection of Persian poetry which appears in these pages.

Prince Riding Elephant

Mughal School



. . . that art may readily serve as a treasury of motifs to give modern interpretations which may easily fit into the scheme of contemporary fashion . . .

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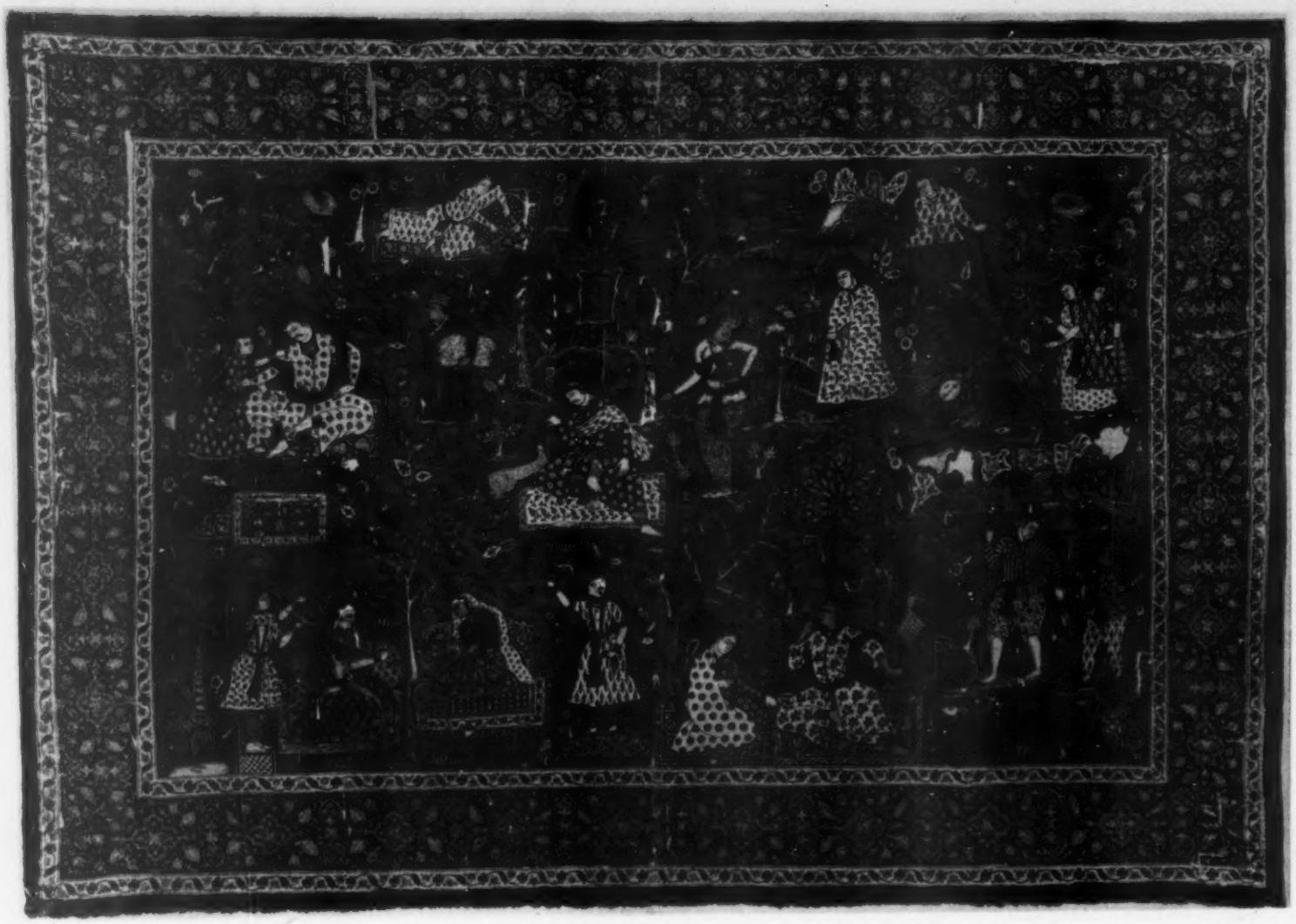


HOW MUCH DESIGN INSPIRATION

IN THIS METROPOLITAN MUSEUM OF ART MASTERPIECE?

This cotton print — painted in India several hundred years ago and which serves as a cover for Issue Number Five of American Fabrics — also serves to inspire a series of modern fashion designs. From the Near East Exhibit of the Costume Institute.

Figures from the Indian cushion cover reproduced on our cover are the inspiration for the fashion designs illustrated by Babs Rawlings. She takes a red and white jacket worn by the gun-carrying huntsman, separates it from its patterned pantaloons, allies it instead with a full, full skirt. She teams a jewelled sari with a basic black dress. She adapts the coat of some Indian Prince and unites it with a pleated chiffon skirt. (See next two pages.) English-born Babs Rawlings is an expert on the history of costume and fashion. Her drawings are evidence of a belief that the dress of yesterday — and centuries before — can be the source of to-morrow's high fashion.

DRAWINGS BY BABS RAWLINGS

Dinner coat inspired by coats worn by high caste women and Indian Princes.

Indian sari of gold and black draped at neck and waist of black jersey dress.

VELVET WITH HUNTING SCENES. KASHAN, SECOND HALF OF THE 16TH CENTURY. — COURTESY OF THE MUSEUM OF FINE ARTS, BOSTON

THE INFLUENCE

OF THE ART OF PERSIA

Throughout the centuries, the Persian talent for beauty of form has enriched the arts and industries of other nations. Dr. Arthur Upham Pope, director of the Asia Institute, writes on the influence of this art . . . how it can be used to help creative moderns to new approaches to old problems.

For 5,000 years, ornamental styles originating and developed in the Iranian plateau have been inspiring, guiding, enriching the art of other nations. The original patterns which we find on the exquisite prehistoric pottery that dates from earlier than 3,000 B. C. were declaring man's need for divine assistance, his anguished hope for abundance of life, his prayers for rain, or equally earnest prayers for sunshine.

All of these faiths, hopes and needs were incorporated in semi-pictorial symbols of great beauty, spirit and emotional force. Beside them, the ornamental repertoire of the western world, even in the art of Greece, were rather thin, perfunctory and for the most part obvious. Through tens of centuries, this talent and passion for the beauty of pattern evoked new themes and new skills.

Poetry in Design Merged

The Persians loved clarity, precision, and they infused these qualities with poetic imagination. They had an extraordinary feeling for rhythm and for the lively movement that could be suggested by lines. They developed an equally fine sense for texture, whether in fabrics, like carpets or decorated silks; in the incomparably rich stucco ornament; in wood or silver inlaid metal; in the superlative brilliance of the enameled tiles which covered their monumental buildings with a mantle of dazzling beauty; or whether it was in simple household furnishings, decorations, or workers' tools. Always we find dominant a sense of decoration, a lust for pure color, the development of novel and striking color chords, entrancing patterns and interesting contrasting textures.

These qualities have a universal appeal. Their clarity and rationale, along with their stimulating color and movement, appealed to people everywhere. Persian designs were copied in Italy. They decorated the triumphal arches in London in the 16th century; were copied in mural paintings, or used in flower sprays in ogival lattice work that had been a theme of Persian art for thousands of years. They were copied in China, they dominated a great section of the art of India, and Turkish art is largely dependent on Persian models; while a whole colony of Persians plied their trade with fame and luxury in Venice of the 14th, 15th and 16th Centuries.

A Stimulating, Nourishing Source

The art of Persia had much to contribute to our own art. The decorative patterns of the western world are mostly weary derivatives of the ornamental themes of the Renaissance. These in their own time and place were superb, but they were first class only when executed with greatest skill, and that took time and cost a lot. When copied now on the borders of magazines or candy boxes, on textile fabrics or architectural ornaments, they are hurried, perfunctory, monotonous. They have their roots in no patterns that are significant. The meanings the ornaments might once have had have long ago been forgotten. We have ceased to respond to them any more, and for the sake of stimulus we have turned sometimes to weakly violent, ostentatiously original patterns preferred by some of the modernistic extremists which force our attention by shock tactics. These, in the long run, also grow tiresome. But in the art of Persia, there are thousands of themes, some monumental, some exquisite, some chaste and elegant, some barbaric in the richness and eloquence of their color — all of them genuine, exhilarating and sound: the product of eons of experience, of a deep and sincere passion, of poetic imagination and superb technique.

* * *

The rich and varied art of Persia is not to be imitated. Imitators are always second rate. But it is an art to be studied with sympathy and open-mindedness. It is an art both nourishing and stimulating that will show our artists new solutions of old problems; will enliven their perceptions, enhance their skill, and deepen their artistic understanding. The art of Persia has a precious contribution to make to the reviving art of our day. — ARTHUR UPHAM POPE

In this Persian miniature, Kai Ka'us attempts to fly to heaven on the wings of four golden birds.

FLYING TO HEAVEN

A Story Told in East and West in Painting, Tapestry, and on Woven Fabrics, of Man's Attempt to Fly to Heaven

For countless centuries men have longed to explore the far reaches of the sky. The Old Testament story of the Tower of Babel makes no mention of flight, but an Arabian tradition says that Nimrod, one of its builders, later tried to fly. How the Persian ruler, Kai Ka'us, attempted this feat long afterward is told by Firdausi, poet of Persia, in his Shah-Namah, or "Book of Kings," completed in A.D. 999.

According to the Shah-Namah, Ahriman, embodiment of evil, set out to arouse the ambitions of the Shah so that he might provoke Ormuzd, embodiment of good. Ahriman sent one of his demons to Kai Ka'us in the form of a handsome youth, who praised the Shah's power and magnificence, but implied that one thing was lacking. When Kai Ka'us demanded what this might be, the demon answered:

" 'It is that thou knowest not the nature of the sun and moon, nor wherefore the planets roll, neither the secret causes that set them in motion. Thou are master of all the earth, therefore shouldest thou not make the heavens also obedient to thy will?'

Man Aspires to the Stars

"When Kai Ka'us heard these words of guile his mind was dimmed, and he forgot that man cannot mount unto the skies, and he pondered without ceasing how he could fly unto the stars and inquire into their secrets. And he consulted many wise men in his trouble, but none could aid him. But at last it came about that a certain man taught him how he could perchance accomplish his designs. And Kai Ka'us did according to his instructions. He built

him a framework of aloe-wood, and at the four corners thereof he placed javelins upright, and on their points he put the flesh of goats. Then he chose out four eagles strong of wing, and bound them unto the corners of this chariot. And when it was done, Kai Ka'us seated himself in the midst thereof with much pomp. And the eagles, when they smelt the flesh, desired after it, and they flapped their wings and raised themselves, and raised the framework with them. And they struggled sore, but they could not attain unto the meat; but ever as they struggled they bore aloft with them Kai Ka'us and the throne whereon he sat. And so long as their hunger lasted, they strove after the prey. But at length their strength would hold no longer, and they desisted from the attempt. And behold! as they desisted, the fabric fell back to earth, and the shock thereof was great. And but for Ormuzd, Kai Ka'us would have perished in the presumption of his spirit."

The eagles had dropped the Shah in the desert of Cathay, where there were none to help him, and he suffered the torments of hunger and thirst. Then he remembered his sinful pride and prayed for pardon.

The Lesson of Humility

Meanwhile the hero, Rustam, learned what had happened and set out with an army to seek Kai Ka'us. When he had found his master he reproved him bitterly for the reproach which he had brought upon his country because "a king puffed up with idle pride was seated upon her throne, a man who deemed in his folly that he could mount unto the skies, and visit the sun and moon, and count the stars one by one."

Kai Ka'us listened humbly, and when he came back to his kingdom he lay in the dust many days and nights before he dared sit upon his throne again. And thereafter he ruled with justice and humility.

Legend of Alexander the Great

A fifteenth-century Persian miniature from a copy of the Shah-Namah shows a simplified version of the flight, in which Kai Ka'us himself holds the meat, while golden birds fly beneath him, outlined against Oriental clouds of gold and white against a brilliant blue sky.

The story was old when Firdausi wrote — indeed it was already being told about another ruler — Alexander the Great. Soon after Alexander's death in 323 B.C. fantastic legends began to grow up in the East, which he had conquered, about his sufficiently fabulous career. Many of these crept into the mediaeval European romances of Alexander, among them the story of his attempt to explore the heavens.

The mediaeval Church treated this incident as a supreme example of sinful pride, and Alexander's flight was carved on cathedral doors and choir stalls as a warning. The scene also appeared on woven fabrics from the Byzantine Empire and countries of mediaeval Europe. A fifteenth-century tapestry shows God looking disapprovingly from heaven, while Alexander holds meats above the heads of four strange winged creatures — for the eagles were now changed into fabulous griffins.

In the same century, however, Leonardo da Vinci, unmoved by the moral of the downfall of pride, was making drawings and propounding theories concerning the possibility of flight. — *Margaret R. Scherer, Research Fellow, Metropolitan Museum of Art.*

Bihzad, Persian, early XVI century — Metropolitan Museum.

THE DANCING DERVISHES

"A purely religious use of music and dancing is that of the Sufis, who by this means stir up in themselves greater love towards God, and often obtain spiritual visions and ecstasies, their heart becoming in this condition as clean as silver in the flame of a furnace, and attaining a degree of purity which could never be attained by any amount of mere outward austerities. The Sufi then becomes so keenly aware of his relationship to the spiritual world that he loses all consciousness of this world, and often falls down senseless.

Music and dancing fan into a flame whatever love is dormant in the heart, whether it be earthly and sensual, or divine and spiritual. Therefore if a man has in his heart that love to God which the Law enjoins it is perfectly lawful for him to take part in exercises which promote it. On the other hand, if his heart is full of sensual desires, music and dancing will only increase them, and are therefore unlawful for him.

It is not, however, lawful for the aspirant to Sufism to take part in this mystical dancing without the permission of his "Pir," or spiritual director. It is related of the Sheikh Abu'l Qasim Girgani that, when one of his disciples requested leave to take part in such a dance, he said, 'Keep a strict fast for three days; then let them cook for you tempting dishes; if, then, you still prefer the dance, you may take part in it.' The disciple, however, whose heart is not thoroughly purged from earthly desires, though he may have obtained some glimpse of the mystics' path, should be forbidden by his director to take part in such dances, as they will do him more harm than good."

From "The Alchemy of Happiness" by Muhammad ibn Muhammad Abu Hamid AL-GHAZALI. 1058-1111 A.D. Trans. Claude Field. John Murray. London, 1910.

NOAH'S ARK

Noah built an Ark in the desert: a hundred speakers of parables ran up to ridicule him.

"He is making a ship in the desert where no well of water exists: what an ignorant fool he is!"

One was saying, "O ship, run!" while another said, "Make wings for it too!"

Noah said, "This is by the command of God: this will not be defeated by jeers." . . .

Be not like Noah's son Canaan, who was swimming in the Flood and saying, "I do not want the ark of Noah."

Noah said, "Hey, come and sit on thy father's ark, that thou mayst not be drowned in the Flood, O despicable one!"

He answered, "Nay, I have learned to swim: I have lighted a candle other than thy candle."

Noah said, "Beware! Do it not, for these are the waves of the Flood of tribulation; today hand and foot and swimming are naught.

'Tis the wind of vengeance that extinguishes the candle of contrivance. No candle but God's is enduring. Be silent!"

He said, "Nay, I will go up that high mountain: that mountain will protect me from every hurt."

Noah said, "Beware! Do it not, for at this time the mountain is but a straw. God giveth safety to none except His beloved."

Canaan said, "Father, for years thou hast said this; thou are saying it again: thou are deranged with folly.

How many of these things hast thou said to every one, so that oftentimes thou hast heard a cold answer!"

Noah said, "What harm will it do if thou listen once to the advice of thy father."

On this wise was Noah speaking kindly counsel, and on that wise was Canaan uttering harsh refusal.

They were engaged in this talk when a fierce billow dashed upon Canaan's head, and he was shivered to fragments.

Noah said, "O long-suffering Lord, my ass is dead, and Thy Flood hath carried away the load.

Many times Thou didst promise me, saying, 'Thy family shall be saved from the Deluge.'

I, simple, fixed my heart on hope of Thee: why then, has the Flood swept my garment away from me?"

God said, "He was not of thy family and kinsfolk: didst not thou thyself see that thou art white, he blue?"

When the worm of decay has fallen upon thy tooth, it is not a tooth any more: tear it out, O master.

In order that the rest of thy body may not be made miserable by it, become quit of it, although it was once thine.

The Prophet said, "I am as the Ark in the Flood of Time.

I and my Companions are as the Ship of Noah: whoso clings to us will gain spiritual graces."

When you are with the Shaykh you are far removed from wickedness: you are under the protection of a life-giving spirit:

Do not break with the prophet of your days: do not rely on your own skill and footsteps.

Lion though you are, you are self-conceited and in error and contemptible when you go on the way without a guide.

Set your foot into the ship and keep going quickly, like the soul going towards the soul's Beloved.

From "The Mathnawi," of Jalalu'ddin Rumi. 1207-1273 A.D. Trans. R. A. Nicholson, Lozac & Co., London, 1926.

Collection of Miss Kirkor Mirassian

Lovers Dallying — a Persian 17th Century painting in the Demotte collection.

Mountain Goat Falling — from the Pierpont Morgan Library

LOVE is the astrolabe of God's mysteries.
A lover may hanker after this love or that love.
But at the last he is drawn to the KING of Love.
However much we describe and explain love,
When we fall in love we are ashamed of our words.
Explanation by the tongue makes most things clear.
But Love unexplained is better.

From The Mathnawi of Jalalud-din Rumi 1207-1273.
Trans. E. H. Whinfield.

Kisses are like salt water — that I know.
The more you drink the thirstier you grow.

By Rudagi 880-941 A.D. Trans. E. Tickjens in Poetry of the Orient ed. E. Tickjens, Knopf 1928.

ALWAYS at night returns the Beloved: do not eat opium tonight;
Close your mouth against food, that you may taste the sweetness of the mouth . . .
Look now, here is a bargain: give one life and receive a hundred.
Cease to behave as wolves and dogs, that you may experience the Shepherd's love . . .
Think of nothing except the creator of thought;
Care for the soul is better than feeling care for one's bread.
Why, when God's earth is so wide, have you fallen asleep in a prison?
Avoid entangled thoughts, that you may see the explanation in Paradise.
Refrain from speaking, that you may win speech hereafter;
Abandon life and the world, that you may behold the Life of the world.

From The Divani Shamsi Tabriz by Jalaluddin Rumi 1207-1273.
Trans. R. A. Nicholson Cambridge V. P. 1898.

THIS I ask Thee, tell me truly, O Ahura!
What great artist created light and darkness?
What artisan produced the calm of restful sleep and the zeal of active life?
Who made the dawn, the moon, and the night,
That, like monitors, call enlightened men to their duties?

This I ask Thee, tell me truly, O Mazda!
Who so balanced the earth and the heavens, and keeps them from falling away?
Who created the waters and the plants?
Who yoked swiftness to the winds and motion to the clouds?
Who save Thyself is the Creator of the Good Mind, O Mazda?

From the Zendavcota 4000 to 1000 B. C. (from "The Divine Songs of Zarathushton" by J. D. Irani. MacMillan N. Y. 1926).

Others fear what tomorrow may bring.
I am afraid of what happened yesterday.

From the Invocations of Sheikh Abdulla Ansari of Herat 1005-1090.
Trans. by Sardar Sir Jogendin Singh. John Murray 1939.

Velvet Cover of Shah — Asia Institute

IT IS written in the annals of Ardeshir Babekan that he asked a physician how much food ought to be taken daily. He answered: "The weight of one hundred dirrhems were enough." The king asked him: "What strength will this quantity give me?" He replied: "This quantity will carry thee; but what ever more is taken, thou wilt be the carrier of it."

Eat to live, thy prayers repeating;
Think not life was made for eating.

From The Rose Garden of Sa'di.

A CERTAIN man came to Nusherwan the Just and told him, with glee, God had taken from this world an enemy of his.

Nusherwan replied: "Have you heard, by any chance, that He intends to spare me?"

From "The Gulistan" or "Rose Garden" of Moslah-uldin SADI-al Shirauzi. 1193-1291 ed. T. F.

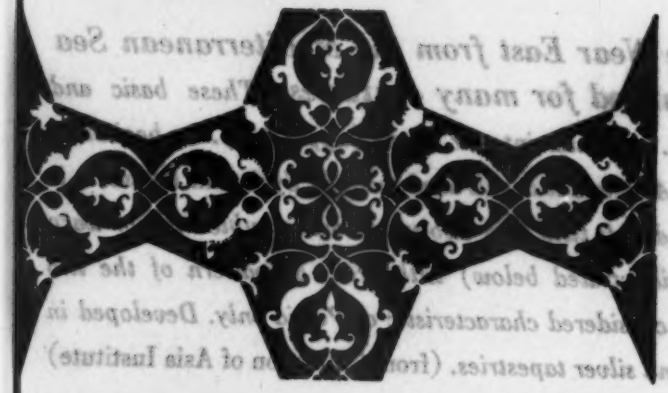
If thou canst walk on water
Thou art no better than a straw.
If thou canst fly in air
Thou art no better than a fly.
Conquer thy heart
That thou mayest become somebody.

From the invocations of Sheikh Abdullah Ansari of Herat 1005-1090. Trans. Sardar Sir Jogendin Singh. John Murray 1939.

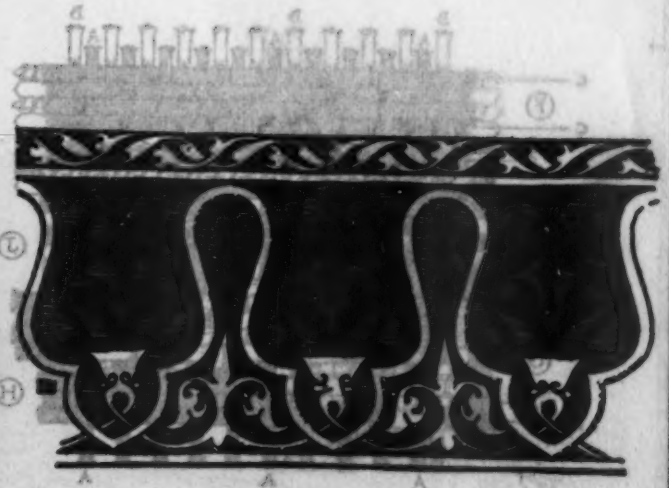
I MADE straight for Abu Sakhr son of Amr. I burst the joints of his harness with a thrust that went straight through him, in spite of haste and nervousness. I left the spear-point gleaming in the middle of his back, looking as though its blade were the beak of a vulture; And if he recovers, it will not be because I used charms over him; and if he dies, why, that was my purpose.

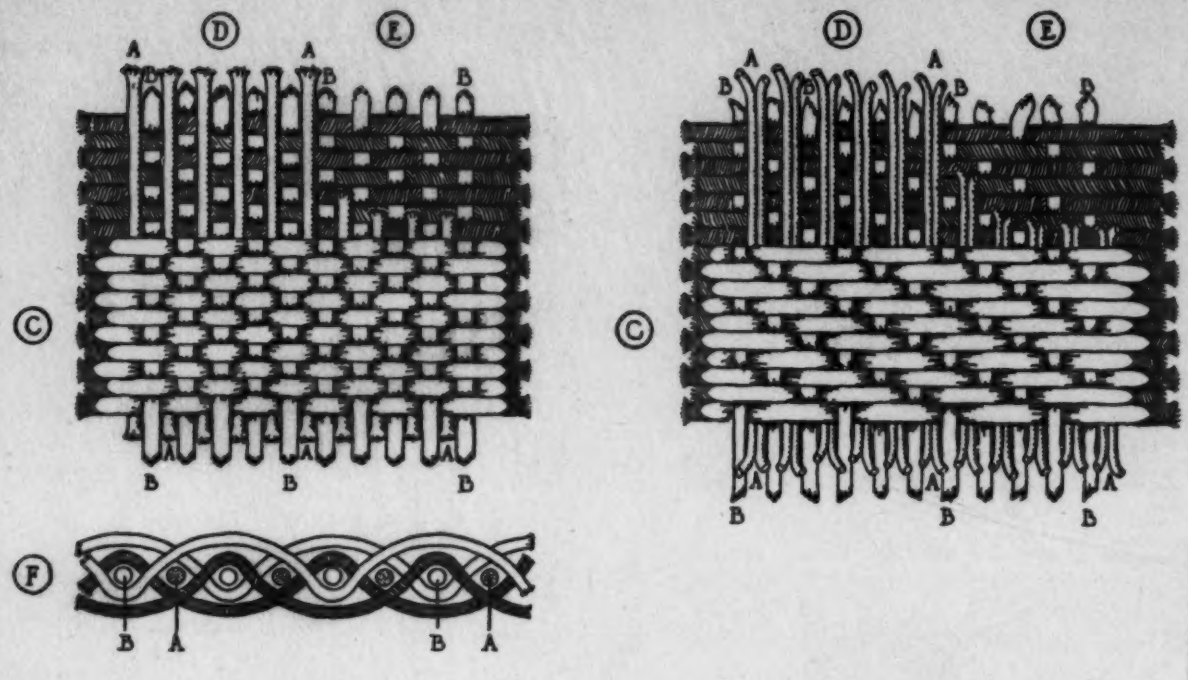
By a man of Abd al-Kais (date unknown).
Trans. Sir Charles Lyell (in Poetry of Orient Knopf 1928).

Trust in God: (but tie the camel's leg).
Persian proverb.

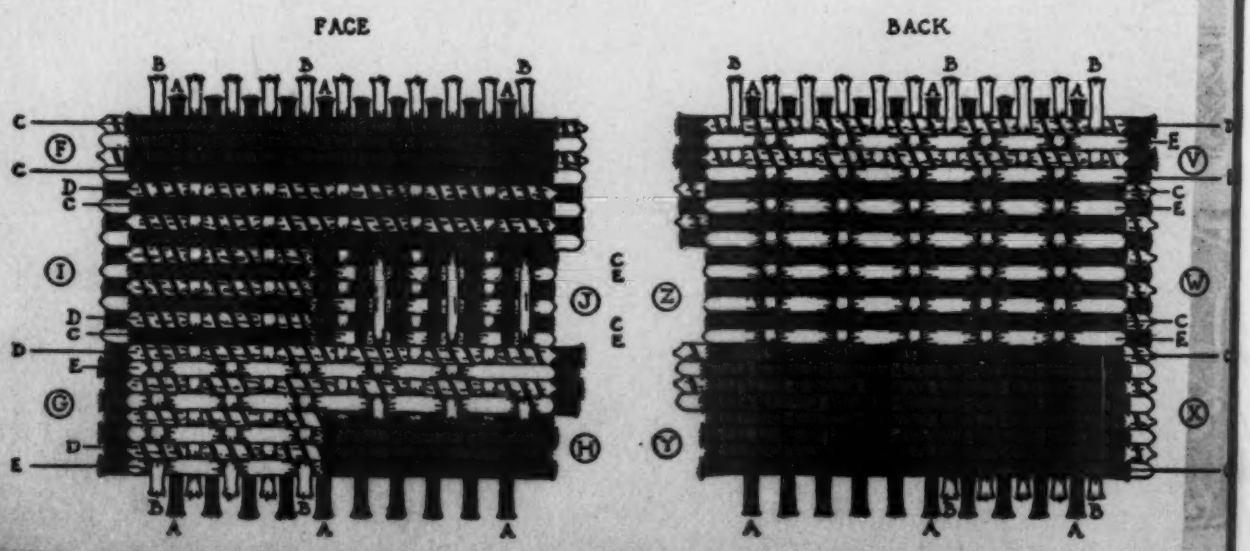


CARVED STONE . . . GHAZNA





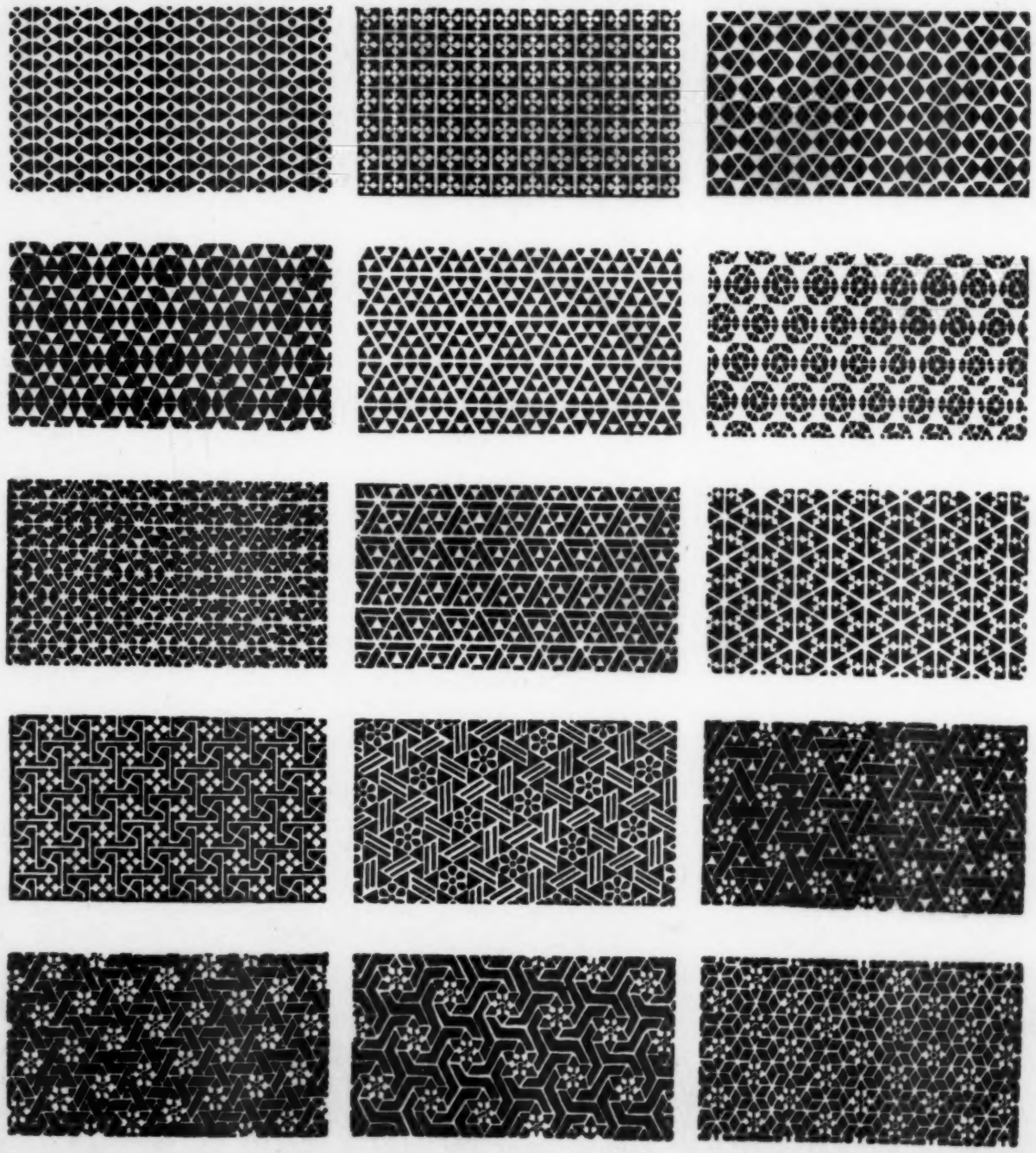
THE WEAVING TECHNIQUE of the Near East from the Mediterranean Sea to Persia has endured virtually unchanged for many centuries. *These basic and long-lasting weaves are:* **1.** *The compound cloth . . . singular interior warps (upper left). Its beginning has been traced back as far as the fourth century, A.D. and it is still used today in Syria and Persia. It is considered the longest lasting weave.* **2.** *Compound weft twill over two warps with double interior warp (right above).* **3** *Double cloth face and back (illustrated below) with areas of pattern of the two cloths, alternated by single weft. Authoritatively considered characteristic of Persia only. Developed in the XVI Century and found in a great many gold and silver tapestries.* (from Collection of Asia Institute)



DESIGNS IN CARVED STUCCO

Uncomparably rich stucco ornaments are a clue to the sense of decoration and pattern possessed by the artists of centuries ago.

PERSIAN XIII-XIV CENTURY



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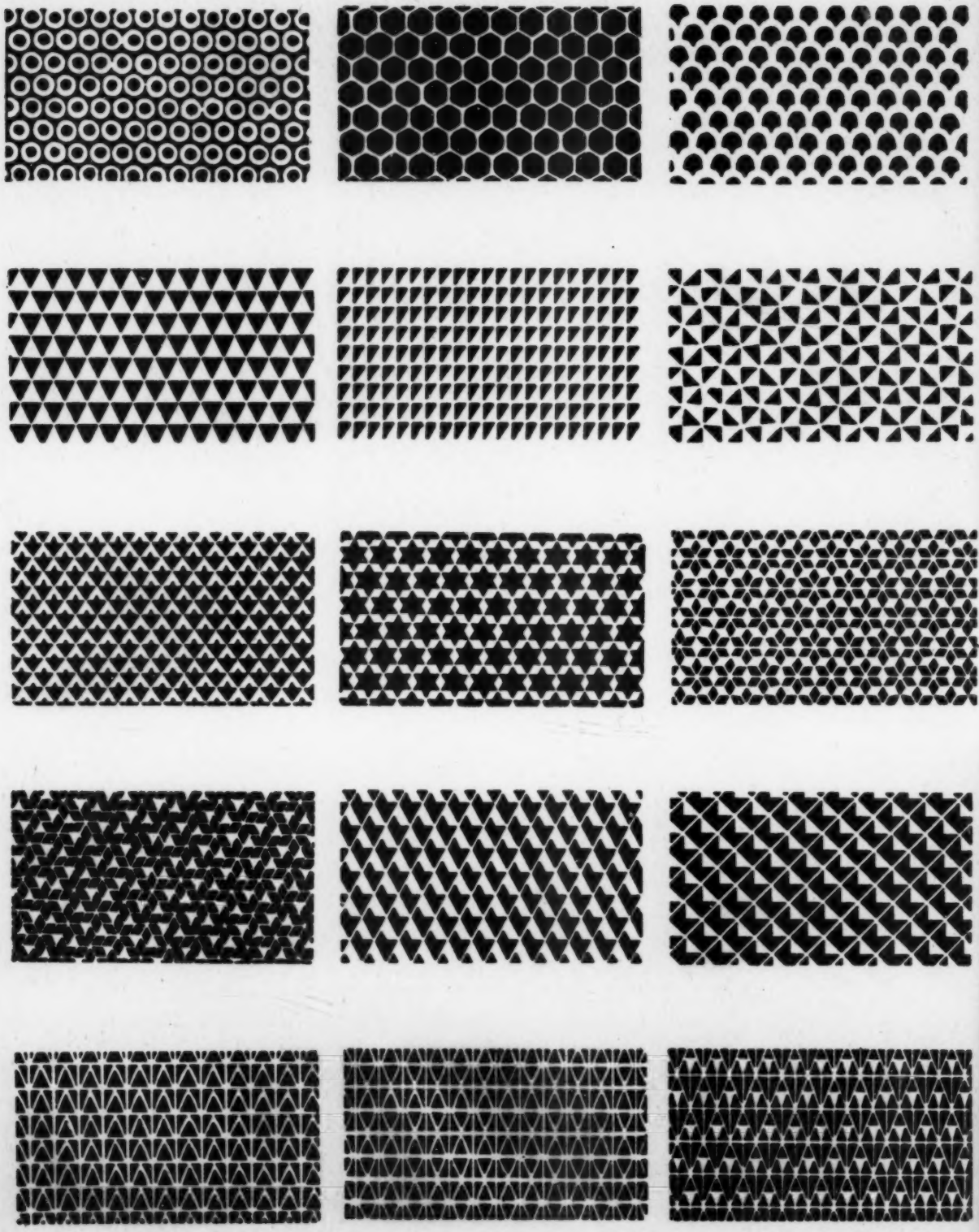
Designs In Carved Stucco (continued)

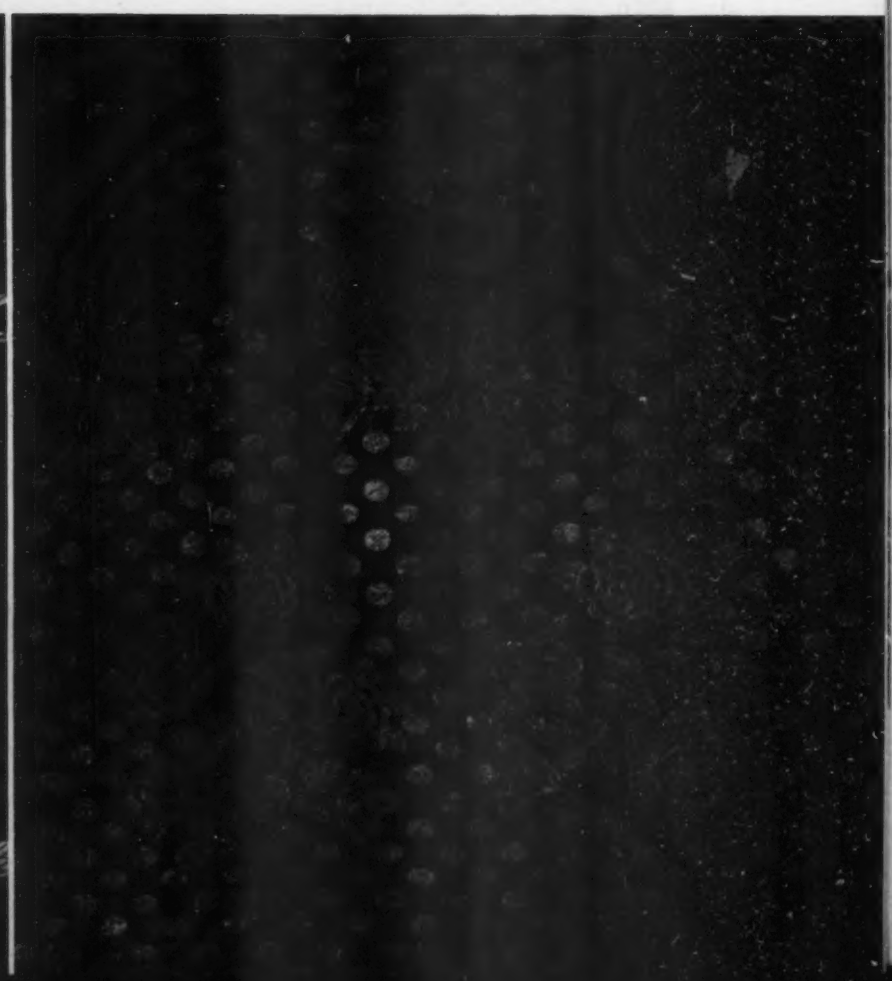


XVI Century Safavid silk tissue.

Persian satin — XVII Century.

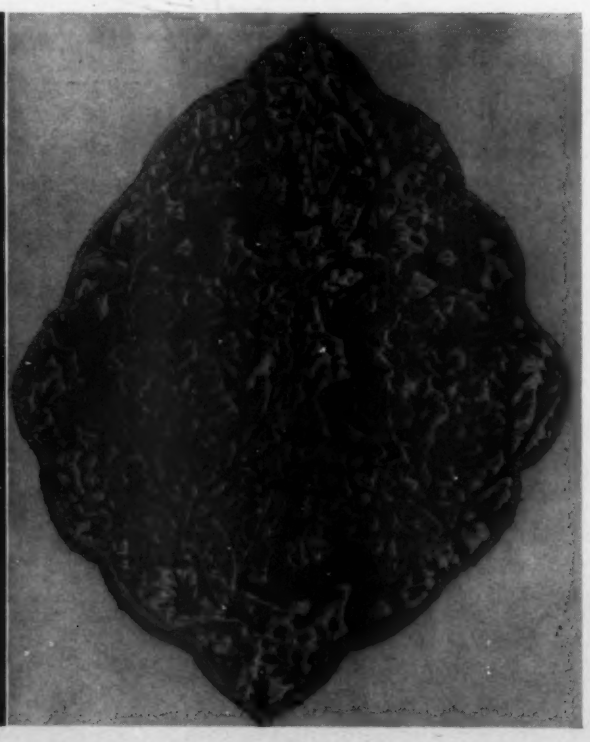
Isfahan taffeta — XVII Century.

XVII-XVIII Century silk tissue.



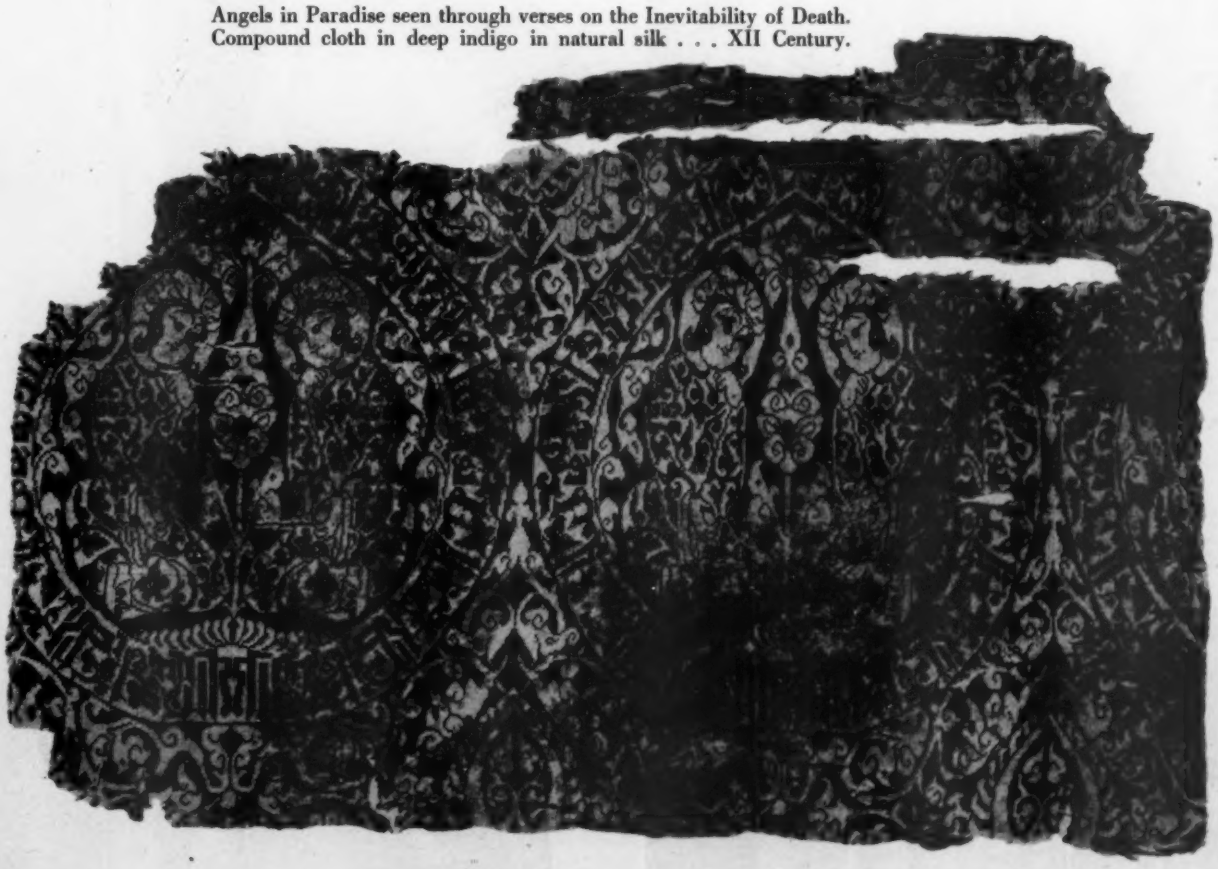
Silk Tissue showing hunting scene, XIV Century.

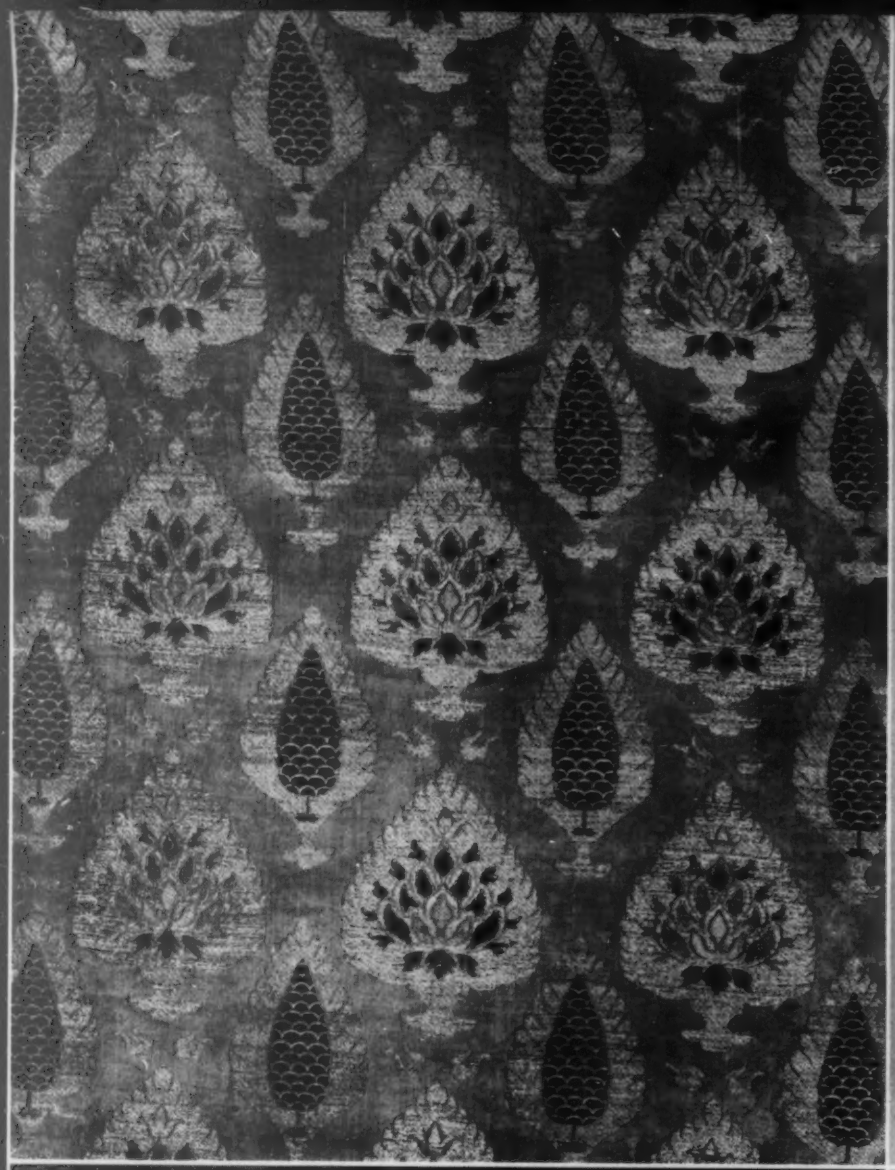
Palmette and border detail from Sari cloth . . . Persian silk velvet with scalloped edges.



The spirit of a XVII century Persian silk cloth with animal detail is captured by American Silk Mill's gay modern print.

Angels in Paradise seen through verses on the Inevitability of Death. Compound cloth in deep indigo in natural silk . . . XII Century.





Costume from Museum Collection.

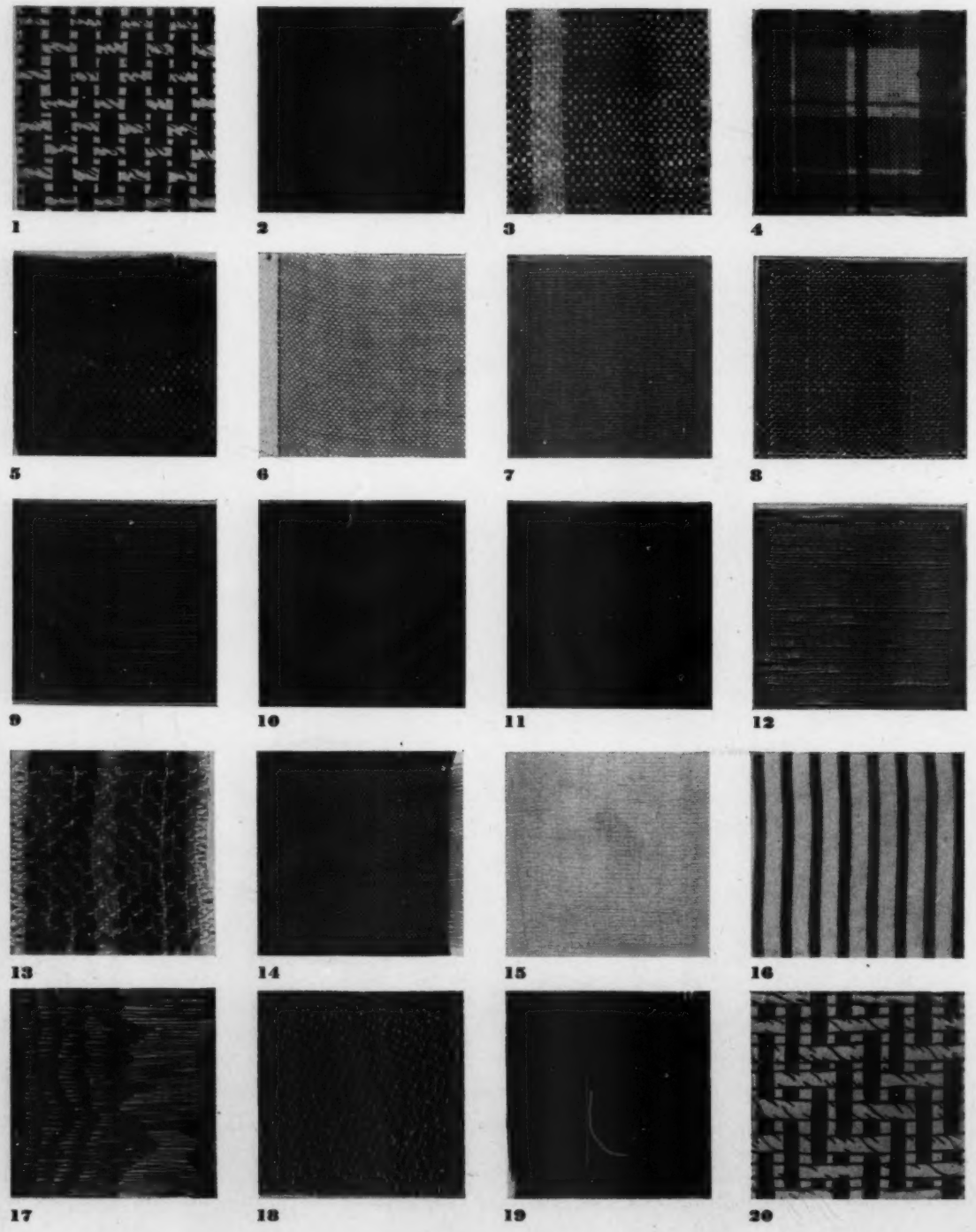
Glass Bottle, Syrian, early XIV Century.

The illustrations on opposite page: Upper left, Persian XVI Century silk tissue. Upper right, XII Century Iranian incense burner. Bottom photos, Persian XVII-XVIII Century coats.

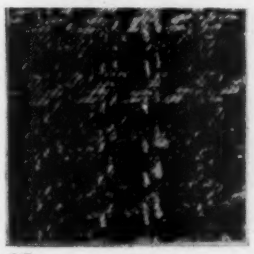
ART OF THE NEAR AND MIDDLE EAST . . . END

EIGHTY STANDARD FABRICS

1. Interlacing of a plain weave — 1-up and 1-down. Four repeats each way.
2. Plain weave in a duck fabric; heavy ply yarn used both ways.
3. Plain Weave showing colored warp and white filling in linen fabric.
4. Plain Weave as shown in plaid dressgoods.
5. Plain Weave in a linen fabric. Irregularity in filling yarn is caused by weaving and texture. Warp yarn is usually more regular and straight in a fabric when compared with filling yarn which is not under tension in loom weaving.
6. Plain Weave is oxford shirting made from fine, high-twist warp and bulky, loose-twist filling.
7. Plain Weave is poplin characterized by fine warp and a slight cord effect or rib in filling direction. (Cylindrical filling yarn tends to give the surface effect in the cloth).
8. Plain Weave in a linen-textured rayon fabric.
9. Plain Weave in faille made from rayon or silk. Fine warp is used and the cord or rib in the filling direction is made possible by rather cylindrical yarn.
10. Plain Weave in a tropical worsted suiting fabric.
11. Plain Weave in a homespun fabric made of wool yarn; tight texture is apparent.
12. Plain Weave in shantung which is characterized by regular warp and slubby, uneven filling yarn for the horizontal effect.
13. Plain Weave in which bulky, fancy or novelty yarn is used in the warp; filling is made of a fine yarn.
14. Plain Weave Variation. Chambray is made of colored cotton warp and white filling.
15. Plain Weave Variation. Dimity woven with a cord effect in warp direction.
16. Plain Weave Variation. Seersucker made with a permanent crinkled or puckered effect in the warp direction; effect is made possible in the finishing of the goods. Plisse fabric, made to simulate seersucker, is not permanent in finish.
17. Plain Weave Variation. Moire or watermarked effect often seen on taffeta and similar fabrics. Fine warp and cylindrical filling are used to obtain the surface effect which is enhanced by the moire treatment applied in finishing of the cloth.
18. Plain Weave Variation. Crepe fabric made with a plain weave in which certain raisers are left out of the construction according to some plan or motif in order to produce the crepe, sand or granite feel and effect.
19. Plain Weave Variation. Crepe fabric made with bulky, fancy yarns in both warp and filling directions.
20. Interlacing of a 2-up and 2-down right-hand twill weave. Two repeats each way.



American Fabrics presents a handy guide to the major types of Textile Fabrics . . . compiled by Dr. George Linton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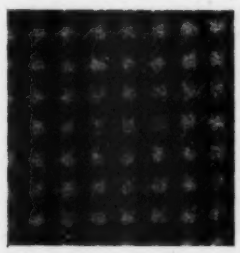
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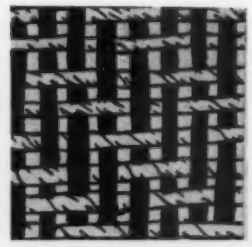
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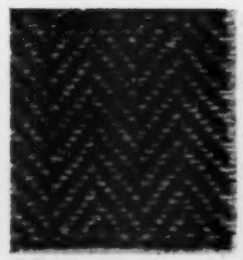
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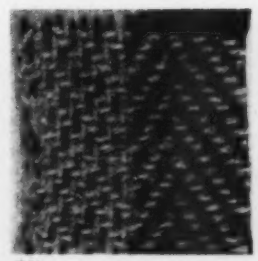
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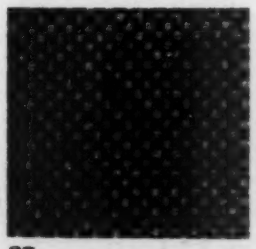
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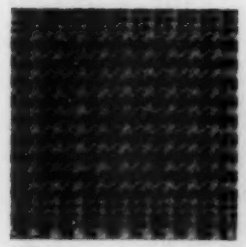
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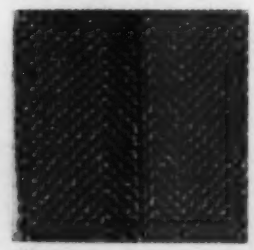
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21. Tweed fabric made from a 2-up and 2-down right-hand twill weave.

22. Harris Tweed made from a 2-up and 2-down right-hand twill weave.

23. Woolen fabric made from twill weave with fancy or novelty warp yarn.

24. Chalk stripe fabric made with twill weave.

25. Banjo stripe fabric made with twill weave.

26. 2-up and 2-down twill weave used in a 6-black and 6-white check effect woolen cloth.

27. Covert made from a 3-up and 2-down, steep twill weave of 63-degrees.

28. Gabardine made from a 2-up and 2-down, steep twill weave of 63-degrees.

29. Whipcord made from a 5-up, 2-down, 1-up, 2-down, 1-up, 1-down, steep twill weave of 63-degrees.

30. Cavalry twill fabric made from 63-degree weave. Sometimes called elastique.

31. Tricotine made from a 3-up, 1-down, 3-up, 1-down, 1-up, 2-down, 1-up, 1-down, steep twill of 63-degrees. Material is characterized by its double-diagonal twill line.

32. Interlacing of a 2-up and 2-down left-hand twill weave. Two repeats each way.

33. Fabric made with left-hand twill weave on the face of the fabric.

34. Broken twill fabric, sometimes known as herring-bone. Weave is 2-up and 2-down, with 8-ends of right-hand twill followed by 8-ends of left-hand twill. A true herring-bone fabric.

35. Woolen fabric made with broken twill weave, selvage may be observed.

36. Broken twill fabric made with a 2-up and 2-down twill weave with 2-ends of right hand twill followed by 2-ends of left-hand twill. A true herringbone fabric.

37. Worsted fabric showing birdseye effect.

38. Woolen fabric made with color-effect Overplaid and referred to as Glen Urquhart or Glen plaid. Made on twill weave.

39. Woolen fabric showing hounds' tooth effect. Made on twill weave color effect construction.

40. Woolen suiting made with color effect weave on twill construction.

(Continued on following page)

Eighty Standard Fabrics (continued)

41. Woolen suiting made with color effect weave on twill construction.

42. Novelty worsted fabric made on color effect construction with twill weave to show a design of hairline and tricot effects.

43. Double cloth. Made of two warps and two fillings in construction. A binder warp holds the two fabrics together.

44. Double cloth for a comparison of structure.

45. Interlacing for a Satin Weave, filling effect. Weave is an 8-end, shaft or harness weave with a base or counter of three. One repeat each way.

46. Interlacing for a Satin Weave, warp effect. Weave is an 8-end, shaft or harness weave, with a base or counter of three. One repeat each way.

47. Ticking fabric made from a satin weave.

48. Interlacing for a Basket Weave. The weave is a 2-and-2 plain basket weave. Two repeats each way.

49. Basket weave fabric made from a 2-and-2 plain basket.

50. Birdseye material.

51. Matelasse fabric.

52. Dobby design in fabric. Small designs or motifs feature this type of cloth; made on a dobby loom.

53. Plain pique fabric.

54. Novelty pique fabric.

55. Waffle or honeycomb fabric.

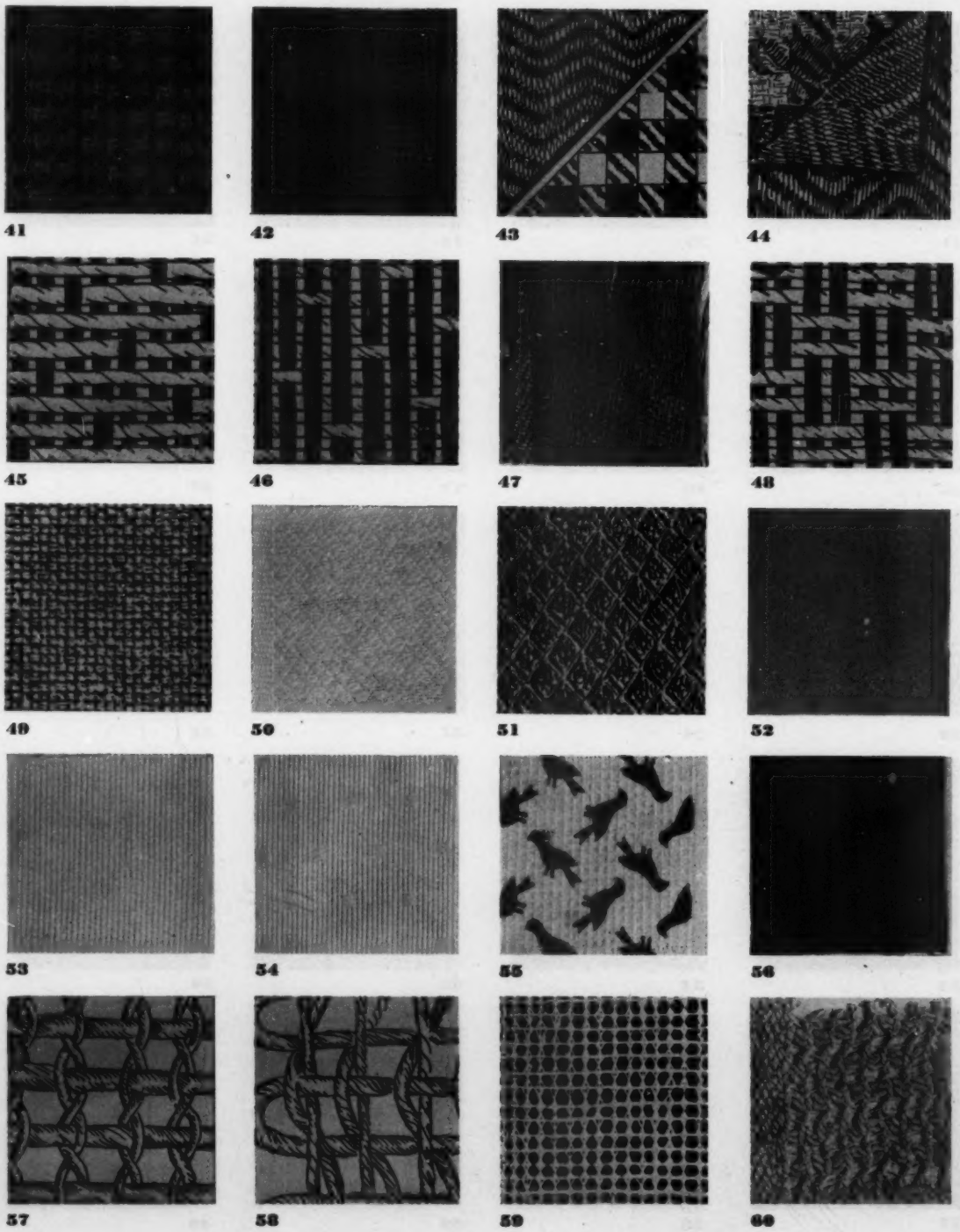
56. Bedford cord fabric.

57. Half-leno or mock leno (doup) construction.

58. Full-leno or gauze weave.

59. Marquisette Weave, a full-leno construction.

60. Doup woven fabric showing selvage.



. . . *Guide to the Major Types of Textiles*

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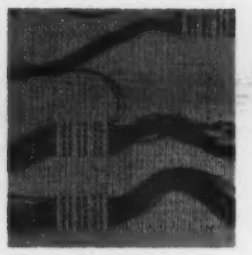
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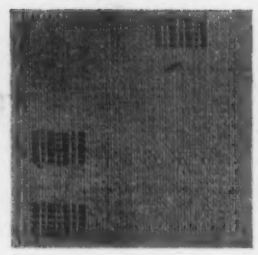
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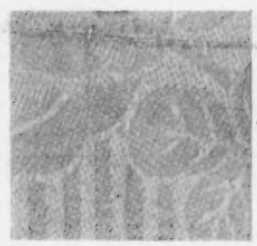
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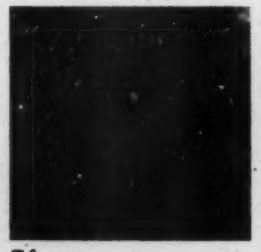
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61. Lappet woven cloth showing unclipped floats in warp direction; shows the fabric as it comes from the loom in gray goods state.

62. Lappet fabric showing the clipped floats thereby giving a sprigged or dotted effect such as seen in dotted Swiss, sprigged dimity, sprigged organdy, etc.

63. Clip-spot fabric prior to shearing or clipping floats in filling direction.

64. Clip-spot fabric after shearing or clipping of the floats; gives an effect similar to lappet woven cloths.

65. Jacquard upholstery fabric to show the face of the goods.

66. Jacquard upholstery fabric to show the back of the goods, for comparative purposes.

67. Jacquard upholstery fabric of high warp and filling texture.

68. Jacquard material of linen table damask.

69. Jacquard design or motif for a carpet or rug.

70. Cut pile weave diagram.

71. Jacquard tapestry fabric.

72. Jacquard brocade fabric.

73. Frieze, an uncut pile fabric.

74. Pile fabric showing effect in warp direction.

75. Pile cloth with high pile as noted in plushes.

76. Knitted fabric made of novelty threads which run in the vertical direction. Fabric is made of acetate rayon, Lurex, and Lastex yarns; used as bathing suit fabric.

77. Knitted fabric with heavy nap to simulate women's wear winter coating characterized by its thick, long nap.

78. Carpet in which the leaf is texturized by Moresque yarnspile fabric made on Jacquard loom.

79. Carpet which shows carved effect on smooth sufacepile fabric made on Jacquard loom.

80. Carpet made with irregular high and low pile effect.

END

Acknowledgment: American Viscose Corp.; M. Stanley Brown & Co.; Callaway Mills; Dan River Mills; Hess, Goldsmith & Co., Inc.; Cyril Johnson Woolen Co.; Mohawk Carpet Mills; Montrose Worsted Mills.

☛ **Blue Overcoat** will return to pre-war eminence particularly in fleeces and soft woolens . . . double and single breasted models with loose back and semi-fitted front.

LOOKING AHEAD TO FALL AND WINTER, 1948

FUR-LINED TWEEDS

The war witnessed the rise of the alpaca or shearling-lined coat, with cotton poplin outer shell. University men, suburbanites and country dwellers accepted these coats with alacrity and a volume business was developed. Today, however, the consumer is tired of the monotonous tans in cotton, whipcord and wool gabardine, with various types of linings. The warmly lined coat idea is here to stay — particularly for campus, stadium, country weekend and spectator wear, but the trend is definitely toward colorful tweed coats, fur-lined, or lined with shearling or alpaca.

SHORT-WARM OVERCOATS

For many years well-dressed sportsmen in this country have worn the British Army Officer's "Short Warm" — generally made in natural color camel's hair or similar type of fabric. This knee length, doublebreasted coat, with leather buttons, is worn by well-dressed men at country sport events; it is the sort of garment which, if promoted by the industry for cold weather wear, should become a volume-selling item. It means an extra sale of the sort that is needed to up volume.

BOLD CHECKED TWEED COATS

Outstanding news in the outercoat field is the bold, colorful check tweed topcoat. Observers at various social and sporting events in this country, confirm the importance of this style, which was originally seen in England. These colorful checked tweeds. seen at hunt races, football games and polo matches, indicate that American men are willing to accept color in outer clothing. The checked tweed coat marks the first post-war style trend away from the over-popular gabardine topcoat which, still the volume-selling coat, has long dominated the scene. Here is a coat that means an extra sale for manufacturer and retailer: an extra coat in the customer's wardrobe, it is worn correctly for town, country and semi-sports. — *Henry L. Jackson, Men's Fashion Editor.*

Herringbone tweed with fur lining, Otter collar and lapels.

D-B fleece overcoat, knee length.

At a recent football game, raglan tweed with colorful overplaid.

THE CONSUMER

The millman, the converter, the apparel manufacturer, the retailer, the retail clerk . . . all throw at Mrs. Consumer words and phrases as selling blandishment . . . all assuming that she knows what they're talking about. Sadly enough, it's gibberish to her. And so writer Cora Carlyle gathers a group of typical

Q. I once asked you what would be the definition of a truly washable rayon. Can you answer this?

A. Truly washable rayon according to high authority should be checked to meet the following standards:

Sanforized — 1% Shrinkage CCC-T-191a

Vat-Dyed — Color Fast Assurance

Tensile Strength — Assurance of Proper Fabric Strength Wet or Dry

Seam Slippage — Tested for Strength to Avoid Slipping after Laundering

Color Resistance to Perspiration

Color Resistance to Crocking — Wet or Dry
Color will not rub off (Cs 59-44)

Color Fastness to hot pressing

Color Resistance to Sunlight — Withstands 120 hours of mid-day sun without change of color (40 hr. Fadeometer)

Color Resistance to Atmospheric Fading

Non-Chlorine Retentive — Laundry chlorine, bleaching material, washes out without injuring fabric (applies to white fabrics)

I feel that the above is an excellent standard for washable rayon.

Q. My husband complains that the lining of his suit shrinks too much when the garment is dry cleaned. What seems to have gone wrong?

A. This is a very good question. During and directly following the war, as all of us know, lining materials were so scarce that many other types of materials were used for this purpose. Many of these fabrics had not been constructed for use as linings; however, any port in a storm!

At present the situation seems to have changed for the better and really good lining materials are once more available. To be on the safe side, however, it is recommended that you question the sales person about the lining when buying a garment. It is also well to examine the stitching.

Q. I am still searching for fabric identification when I buy anything but it is rare that I find it on a garment. Is the store to blame?

A. The store may be partly to blame because there have been instances where tags and manufacturers' labels have been removed. Again, the store may believe that too many tags spoil the appearance of a garment. Further, the store may wish to use its own name as the prominent feature of a fabric or garment. The consumer may be partly to blame, however, because the store would surely identify more fabrics if more pressure came from the buying public.

Q. Just what is a Harris Tweed?

A. Under the terms of the British Board of Trade and the Federal Trade Commission, Harris Tweed refers only to woolen fabric hand woven on the Islands of the Outer Hebrides off the Northern coast of Scotland. This includes among others the Islands of Harris and Lewis.

It has been ruled on several occasions by the Federal Trade Commission to be unfair trade practice to use the term Harris Tweed to describe fabrics not in accordance with the definition referred to. This eliminates the question of imitations inasmuch as there is only one Harris Tweed.

The outstanding fabric is always hand woven. There are two types of Harris Tweed:

1. Fabric woven from hand spun yarn.
2. Fabric woven from machine spun yarn.

Comparatively few of the Tweeds are now woven from hand spun yarn because to spin such yarn for a length of fabric sixty yards or more much time and labor is consumed.

There are some Harris Tweeds made from machine spun yarn and hand spun filling. Harris Tweed made from hand spun yarn is stamped to that effect in addition to the Harris Tweed Trade Mark.

The fabric is used in suiting, topcoating, overcoating, sports wear, ensembles, etc.

Q. What can I do when my beautiful pink velvet chairs get suede shoe cleaner on them?

A. Here is a job that should be given to a professional cleaner. Realize that suede shoe cleaner is made up of a quick-drying "carrier" plus coloring matter. This penetrates deeply into the suede shoe (or in the pink velvet, in this case). Unless you have a shelf of chemical reagents and the knowledge to use them, you are liable to harm the fabric, destroy the color, and possibly "set" the stain — or spread it farther.

Q. When buying fabrics for the living room sofa, and I have two children that are lively, what should I look for?

A. Select a fabric that is truly washable so that it looks like new afterwards. The material must be Sanforized, so that shrinkage will be so slight that the covers will fit after repeated

WANTS TO KNOW...

Mrs. Consumers from time to time . . . asks them what they'd like clarified in textile terms . . . and then fires the questions at Dr. George Linton. Here is the third batch. The moral is: Just because you know what you mean, don't take it for granted that the other person does.

launderings. The colors must be vat dyed to be long lasting and the fabric must be thin enough in texture to handle easily when ironing, so that the operation will not be too burdensome. Or, perhaps a durable glaze is your best bet since it will repel or shed dirt and most stains. Soil will wash off easily and there will be a crisp "hand" remaining to repeated launderings so that starch need not be added.

Q. Will the use of Clorox undermine the life of my linens?

A. No, not if you follow the accurate and detailed instructions on the Clorox label. You will notice that on this label there are clear cut directions for use in spot and stain removal, for bleaching, for laundering, etc. Make sure that you take time to read the label carefully. Don't make the mistake of thinking that if you add more Clorox the outcome will be further enhanced. These directions have been prepared by textile technologists and if closely followed should solve your problem.

Q. What is the value of glass curtains?

A. "Glass" curtains may mean one of two things.

1. Any sheer curtain meant to hang over the glass portion of your window. (this curtain may be made of rayon or cotton net or marquisette, etc.)
2. Curtains made of real glass fiber, (Fiberglas), can also be made to hang over the glass part of the window or be used as "heavy side drapes."

I am presuming from your question that you infer real glass fiber since curtains of this type are much in vogue at present. The virtues of such glass curtains are:

a. They have eye appeal, a lovely soft shining luster that will not wash or wear away.

b. Light goes through each fiber in the fabric. Thus, the entire fabric is translucent. When hung over your window, privacy is assured but the light is not cut off.

c. Fiberglas curtains are non-flammable. If a flame is touched to the fabric it merely melts and does not ignite. For this reason, real glass curtains are used extensively in theaters, hotels, night clubs, restaurants, etc. Homes will use them more and more as homemakers begin to realize their great value.

d. They are washable. Dirt does not penetrate into the fabric, it merely rests on the surface. Washing is very simple. To use an old Pennsylvania Dutch expression merely "dunk" the curtains up and down in suds or detergent. Hang to dry. The curtains will dry at once and no ironing is necessary.

Q. In the very first wearing of my water-repellent raincoat, it became wet through and through. Is the store responsible?

A. You must have worn this raincoat in an extremely heavy rainstorm where a fabric with a completely sealed surface was necessary to keep you dry. A *water-repellent* fabric is treated so that any light or medium showers which strike at an angle will not penetrate. This type has the great advantage of allowing your body to breathe through the open pores of the cloth so that you are comfortable when you meet ordinary rain conditions.

Certainly the store is not responsible for your getting wet since you should have realized the particular qualities of the garment you were wearing.

Q. What is China Silk?

A. "China Silk" in its simplest terminology is the product of silk worms raised in China. By custom, however, "China Silk" has come to mean a very light weight, sheer, lustrous, plain woven fabric used chiefly for linings. Today, however, this fabric is practically non-existent.

Q. Why is it almost impossible to buy a light weight silk?

A. There are two reasons:

a. During the war, machines or frames set up to weave or knit silk fabrics were converted to use other major textile fibers and apparently have so remained.

b. A large part of the consuming public has never worn silk and so there is at present no apparent large demand for silk fabrics — light weight or otherwise. It is a little too early as yet to prophecy the future of silk in the American textile market.

Q. I have often heard the term "post war fabric." Just what is meant by this expression?

A. I believe that the term "post war fabric" has been built up in the public mind by promotion and advertising. As a matter of course we expect it to be beautiful, long wearing, easy to care for, resistant to the ordinary enemies of durability and to possess good surface effect and appearance.

This rather ambiguous term seems to have caused the buying public to expect that it would be different from anything ever shown or marketed before and to have more varied uses. Other than this I know of nothing further concerning this term which seems to have been bandied about from pillar to post and back again.

EMBROIDERY

A new dimension is given to fashion . . . the Schiffli machine creates lace and embroidery for every branch of the apparel industry.

A great advance has been made in embroidery since the days when women painstakingly worked for hours sewing threads into patterns for decorative purposes. Embroidery has emerged from the luxury brackets to take its place in the popular price ranges. The Schiffli embroidery machine has brought luxury to the masses.

Home of the Schiffli machine, and ninety per cent of all embroideries made in this country, is a cluster of towns situated on the banks of the Hudson River in Northern Hudson County, New Jersey, often called the little St. Gall of America because it was from St. Gall that the original Swiss immigrants came, bringing the Schiffli machine with them. Now, in North Hudson, the 428 manufacturers and their employees carry on in the tradition of the original Swiss and German embroidery makers who settled there half a century ago.

Not only have these descendants of the original settlers, and other skilled lace and embroidery makers who joined them, maintained the same high standard of fine craftsmanship, but their ingenuity and the use of the Schiffli machine has made possible a multitude of embroidery uses above and beyond fine lingerie trimming.

Versatility and Adaptability

The word Schiffli means "little boat" and it is this little boat-like shuttle that produces lace or embroidery in widths from ten to fifteen yards and on any kind of material and in any conceivable type of design. The use of this shuttle has changed machine embroidery from a crude facsimile of handwork to a smooth finished product.

Each Schiffli machine has from 682 to 1020 needles, which make it possible to produce fine and elaborate details in appliqués and embroideries of all types on all kinds of fabrics that have the luxurious look of handwork, but without the prohibitive cost.

On lingerie versatile effects are achieved; in lace and net appliqués, combined embroidery and lace designs, net appliqués on bodices, necklines, shoulders, pockets and skirts.

The machine also makes various types of fancy stitching and designs. New patterns are constantly developed in line with advance fashion trends.

The Two Sections of Machine Embroidery

The Schiffli embroidery falls into two groups. One is the framework section, which makes an outstanding contribution to slips and gowns because the patterns are worked on frames and the finished pieces are then attached to the garment itself. The other type makes possible the elaborate trims which may be used in as many ways as fashion dictates. This is the yardage which can be made in various widths and in all fabrics, such as net, crepe, ninon, lace and nylon; in all colors. Here, too, patterns vary from the simplest to the most elaborate.

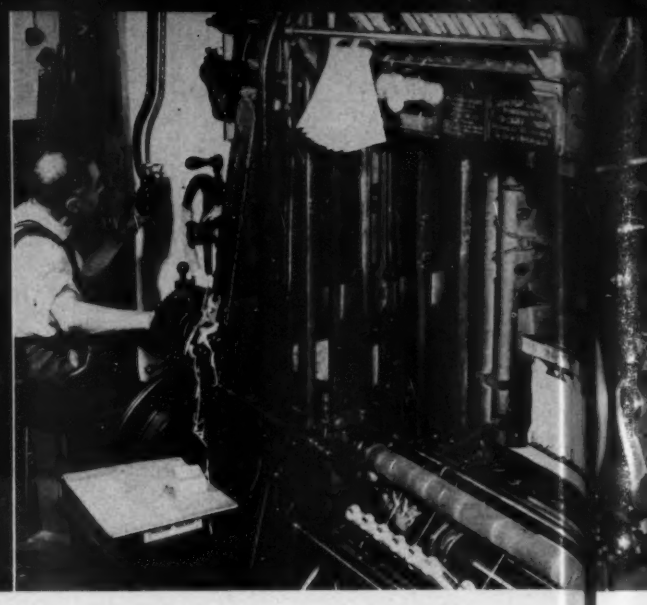
Perhaps the most important factor about the Schiffli machine is its versatility and adaptability, features which make it play an invaluable part in the production of fine lingerie. From detailed appliqués and simple scallops to combinations of insets on appliqués and embroideries, it is able to utilize different fabrics, colors and patterns in innumerable ways.

But far from being confined to lingerie, the Schiffli machine plays a part in every fashion category. Leather and fabric gloves are embroidered. So are slippers, pocketbooks, hats, neckwear, blouses, handkerchiefs, dresses, suits, children's wear, men's apparel, household linens, drapes.

The list is long. But the sails of the "little boat" are set. And its course is boundless. (*please turn page*)

The designer originates the embroidery design on paper. The small drawing is stamped on fabrics for sample patterns and then goes to the enlarging room where its size is increased sixfold.

Individual mending samples are made by "menders" working sewing machines. Samples are approved by buyers before mass production. "Mending" in connection with this work is misnamed, relic of days when embroidery was used for patching.



Transference of design from paper to fabric by the Pantograph machine. The enlarged pattern is traced by hand, each movement controlling 134 needles working the pattern reduced to a sixth.

EMBROIDERY (continued)

Above we show stages in the operation of the Schiffli machine. Below are pictures which are evidence of the versatility of embroidery.

CHILDREN'S WEAR

The small flower, the tiny dot, embroidered on finest muslin or silk, are designed to suit the tiniest child. Other bolder designs are used for teen-agers.

EVENING DRESSES

The gleam of embroidery on the yoke, the sleeves, the skirt of any evening dress lifts it from the ordinary, adds glamor and gives it new importance.

BLOUSES

Tailored designs, lace and embroidered ruffles, flat stitching, all are used. The Gibson Girl trend calls for more and more eyelet type embroidery for teaming with full skirts and wide waistbands.

MUFFLERS

Embroidered initials give the personal touch while a bold pattern is an outlet for a man's sartorial inhibitions.

LINGERIE

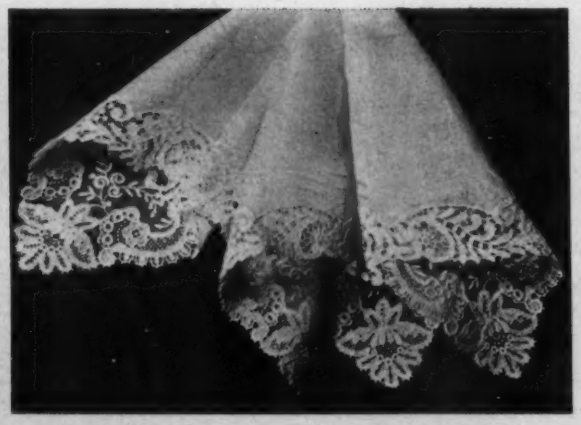
Embroidery is used in many ways — appliqué, lace trims, fancy stitching, all adding femininity and luxury without loss of simplicity.

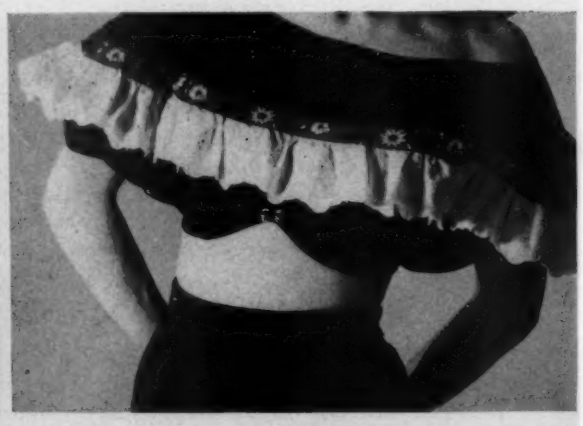
MILLINERY

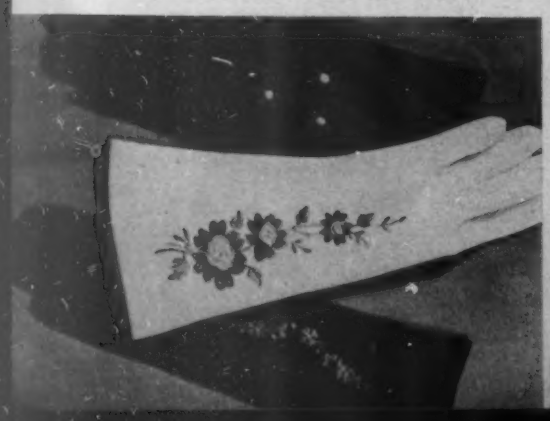
Embroidery goes to the head. Balenciaga uses lace to cover a wide brimmed hat. Christian Dior takes embroidered silk for his little side-tilted pillboxes. Eyelet embroidery is used to make washable, starchable, summer styles.

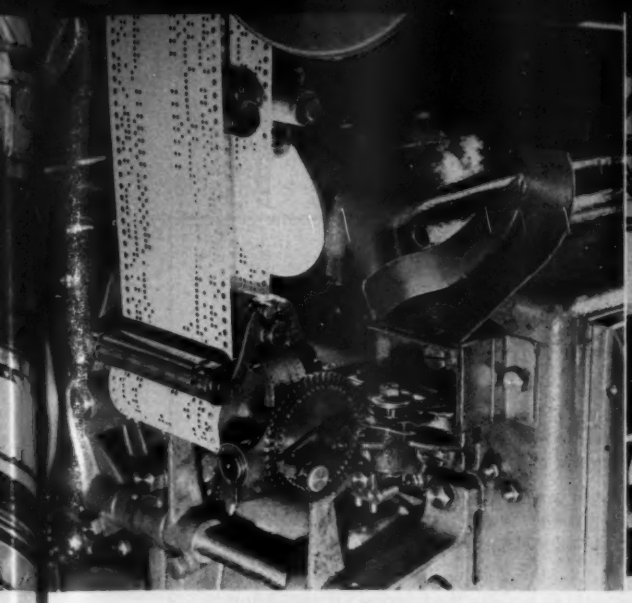
INSIGNIA

Medallions for civilian use — new fad on the West Coast. Garage attendants, waitresses, bellhops, cab drivers wear employers' emblems on their uniforms — follow-up of wartime insignia.

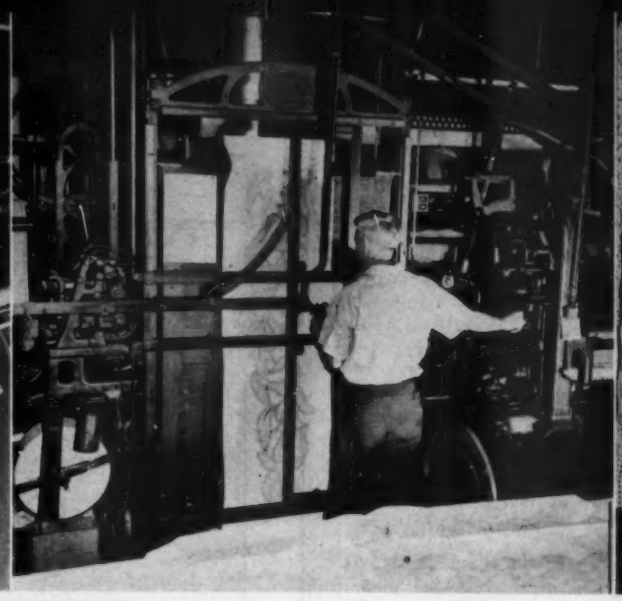








Alternative to hand-controlled Pantograph is automat worked by card roller bearing patterns. These rolls control ten yard machines with 682 needles, fifteen yard machines with 1020 needles.



Making the pattern rolls. Working on the same principle as the Pantograph, the operator traces the design on the enlarged pattern. Simultaneously the design is transferred to the card on the roller (left) and to the sample design on fabric (right).

Rolls control designs on yards of fabric. Workers rethread needles when necessary. Flaws are marked and later mended by hand. For individual motifs backing fabric is destroyed by processing.

GLOVES

Delicately shaded pink roses in a petit-point design decorate the cuffs of cocktail gloves. Strong, brightly colored peasant patterns are used for cotton gloves and felt mitts.

NECKTIES

Quiet colors and designs for the conservative; bright colors and bold patterns for those who prefer them; embroidery caters for the choice of both schools of thought.

NECKWEAR

Embroidery or lace soften severity by light touches at neckline and cuffs. A froth of lace at the throat achieves the femininity that fashion demands.

POCKETBOOKS

Evening pocketbooks that look like the finest handsewn petit-point are machine-embroidered. Flat silk designs in warm colors and gold and silver decorate handbags for the afternoon. Corde pocketbooks are also a form of this type of Schiffli embroidery.

PLAYCLOTHES

Simple designs underline the peasant influence in playclothes. Eyelet embroidery spotlights the can-can influence. Geometrical designs trim the tailored.

SHOES

Felt and satin and velvet — all are embroidered, often with gold and silver with pastel or clear bright colors added. Felt booties are embellished with gold and silver scroll designs.

PETTICOATS

The new darling of fashion, the petticoat, is embroidered at the waist, embroidered at the ruffled hem, the lacy or stitched trim often slotted for the insertion of colored ribbons — new-old fashion of the early days of the century.

COWBOY SHIRTS

Man's instinctive desire for colorful attire is most adequately satisfied by the cowboy shirt with its bright embroidered designs.

Petticoat, pocketbook and bootie by courtesy of Lord & Taylor

AUTOMOBILES

Colors selected for *autos* should create an effect of:

RICHNESS—Depth of color is favored over unusual hues such as lilacs, purples and purple-blues in light values, which lack durability in most American climates.

REGIONAL TASTE—In California tans and beiges are favored, while Eastern cities find more appeal in conservative dark blues and black. Mid-Western styles are in between.

HARMONY—Exterior colors and interior fabrics should be styled as complementary. For example, greenish beige upholstery is set off handsomely by a maroon exterior; a gold-tone interior area looks well with purple-blue exterior.

BUSES

Colors selected for *buses* should create an effect of:

DISTINCTION—Colors should permit identification of buses from a distance.

CONTRAST—Greens should be avoided on exteriors of intercity buses because they blend with the countryside. Color patterns should outline the bus clearly, to lessen danger of collision.

CAMOUFLAGE—Bus operating on country roads are less apt to show dirt if variations of tan are used in exteriors. Interior upholstery in dark brown shows soil less readily than dark blues.

TRUCKS

Color selected for *trucks* should create an effect of:

DISTINCTION—Of the many thousands of colors available to truck operators, those related to the product or service are best for each. For example, a laundry might use white, a florist pink or lavender; a dairy, cream; a brewer golden ale-brown, etc.

CONTRAST—Laws of color contrast should be carefully applied in selecting colors for lettering or trademark emblems, to insure proper visibility.

SHIP EMBLEMS

Colors selected for *ship emblem* should create effect of:

CONTRAST—Against the blue background of the sky, yellow furnishes the best contrast color, as proved in tests in which balloons of various hues were sent aloft.

PERSONALITY—For company-owned vessels, emblem colors should be related to product or package color, to create a color integration through ship emblem, merchandise, advertising, etc.

TRANSPORT AIRCRAFT INTERIORS

Colors selected for *transport aircraft interiors* should create an effect of:

CHEER—They should be animated and pleasing, not muddy looking, not too low in value, not purplish in hue or undertone (purple is apt to be depressing).

ROOMINESS—They should create an impression of spacious and airy interiors, through the nature of individual colors employed and through use of color in combinations.

LIGHT CONTROL—They should have a value gradation sufficient to parry glare without making the interior appear unduly dim and dreary, suitable to the bright reflection of light at the new postwar airways altitude levels.

CAMOUFLAGE—They should, like war-time camouflage colors, relate value and hue properly to disguise soil or stains.

BLENDING—Colors mixed in the weave of upholstery fabrics should insure greater visual interest.

RAILROAD LOCOMOTIVES

Colors selected for *railroad locomotives* should create an effect of:

INDIVIDUALITY—The Diesel colors should coincide with a color scheme adopted for the railroad, and should be integrated in advertising, promotional, brochures, etc.

PRACTICALITY—Locomotive colors should be available in finishes whose components are durable.

CONTRAST—The colors should stand out against country-side and railroad yard background colors, for reasons of safety. (See pages 120 and 121)

RAILROAD COACH INTERIORS

Colors selected for *railroad coach interiors* should create an effect of:

CAMOUFLAGE—Dark blues reveal dust, while dark browns make it less apparent. Color values and hues, selected with an eye to other objectives, must be related to the problem of soot and stain.

LIGHT CONTROL—Railroad coaches provide far too little light for reading — as little as ¼ of one footcandle, where 30 footcandles are needed. Light-reflecting colors assist in solving this problem.

CHEER—Coach colors should be neither drab and innocuous, nor bright and gay. Between the extremes are countless attractive, serviceable colors, well-related to colors seen on the outside. Dining car colors should be those which are stimulating to appetites.

COLOR ON THE MOVE

Howard Ketcham, AMERICAN FABRICS *consultant editor on color and design, has played a leading role in color development in transportation during the past 20 years. In the course of providing colors for American makes of automobiles he conducted research on consumer color preferences over a period of eight years to develop a favored minimum number of automobile colors. He has designed interior treatments of Pan American Clipper planes for the past 12 years, and has also provided color treatments for United Air Lines, American Airlines, Sikorsky, and Bellanca planes. In the railroad field, he has designed coaches and locomotives for Jersey Central Lines, Southern, and M-K-T Railroads. He has designed buses for the Gray Lines and Fifth Avenue Coach Company, and trucks for numerous commercial concerns.*

Once, in an early color-film movie cartoon, a character walked into a field in the center of the screen and blended right into the scenery so well that he disappeared entirely. This tickled the risibilities of movie audiences so that they burst into the proverbial gales of laughter, as expected.

Nature's gift of camouflage, as illustrated in the movie, is necessary for small animals and birds which depend on it for safety; it was even better for GIs in camouflage suits which spared them from detection in Pacific jungle warfare, and for our ships and shore installations which enjoyed a relative immunity to hostile bombers thereby; but it was no laughing matter to locomotive engineers and motorists when the new colors of a Pacific Coast railroad's Diesel locomotives blended into the scenery so well that you couldn't see an oncoming train.

Doubtless there were few laughs indeed when the railroad's budget-makers had to tot up the costs for twice re-establishing the colors of the company's locomotives. The original yellow-and-green color scheme was lost in the background colors of northern California foliage, and the first replacement color scheme of silver and black blended too well with the hues of Nevada deserts.

Not until a black and orange combination had been developed did the line's locomotive engineers cease complaining about oncoming Diesel-powered trains lost in the greenery of narrow canyons, or on the skyline of desert sunsets.

Color Problems of the Railroads

Railroads were the first of the modern travel services to use eye-filling color. Some of the first trains were painted in the gaudiest hues, to compete with vividly bedecked stagecoaches. Then came a long era of drab black steam locomotives, puffing noisily across the landscape after the stagecoach was no more.

After World War I, the introduction of silent, gasoline-operated motor-cars on rails increased the danger of collisions, and a diagonal black-and-white stripe was introduced on the front end. However, the striping obscured the outline of approaching rail-motor cars so that it was hard to see which track to avoid. When the Diesel trains came onto the scene with the operation of Union Pacific's "City of Salinas" in 1934, it was quickly realized that a "zebra" treatment was not enough. Color came back — not as just a problem in consumer taste, but as a necessity which required study in the light of conditions peculiar to railroad operation.

* * *

Today's railroads, airlines, motor transport and shipping lines realize that color is vital to help them operate safely and well, and to attract passengers.

But only at a slow pace is the world of transportation coming to understand that each means of transport has a "color factor" all its own, governed by conditions peculiar to each. Most important of these problems are the background colors and the question of soilage.

A railroad train is set against the countryside colors during the greatest part of its service — against the varied greens of spring and summer foliage, the browns of autumn and winter, and the varying glistening or murky white of the season of snows.

For the most part, railroad travelers are occupied, color-wise, with the view of red barns, varicolored farmhouses, fields of golden wheat or green cornstalks — in season. Some railroads (particularly those of the American Southwest) travel among the browns and tans of desert sand; others piece their way through mountain chasms, among bluish snow-capped crags; others, against dull blue-green ribbons of riversheds and lake-fronts. In providing color for the exterior of locomotives and coaches, and for the interior of passenger cars, a railroad's designer must consider his setting.

The bus or the automobile or the truck is cast more often against the sober gray of city or small-town streets, broken by the brownish reflections of red brick and sandstone buildings. Cross-country buses, trucks and the automobiles of far-ranging motorists also travel highways set against a backdrop of countryside color. The designer of motor-vehicle color treatments must plan against a variety of settings, considering carefully the specific objective of the individual assignment.

The ocean-going vessel lives among the deep blues and greens of the world's great waterways, set off by skies of brightest blue or dullest gray in turn. The operators have a problem all their own, for solution by the color engineer.

Last to enter the picture of color in transport, and latest to seek its answer, are the airliners. In the skyways setting of bright blue sky and fleecy white clouds, heightened by the bright reflection qualities of purer light in the upper air, the airplane presents a color problem all its own.

* * *

Prior to a dozen years ago — in the days of the Ford trimotor planes — color planning and interior styling had not been given the task of improving airlines' customer appeal. Back in 1935 the pioneering Pan American Airways, bidding for intercontinental ocean traffic, adopted the principle that plane interiors should reflect the company's confidence in the security of its investment in flying boats, by using comfortable, luxurious upholstery in cheerful, restful, interesting colors.

Now it is the accepted fact that airlines will employ color and fabric treatments to provide subtle appeals to passenger taste. In many respects, aircraft have set styling examples which have brought improvement to ground transport.

* * *

Have you ever felt the drabness — in any type of travel — of seats lined up, one behind the other, in the same color? Airliners will soon break one styling bottleneck of deadly monotony.

In the long main cabins of next year's Stratocruisers, Pan American planes will use upholstery for forward seats in one color, aft seats in another. An overall harmony will be obtained by matching a soft beige in forward seats and the aft window curtains, and repeating a cool blue-green in aft seats and forward curtains.

Efforts of designers of post-war planes to improve the appearance of airliner interiors have been stimulated by the passengers themselves. In a survey among air travelers by a popular magazine, over two-thirds declared they would willingly pay higher rates in order to enjoy more luxurious accommodations.

Today the demand of the airplane engineer for less weight in passenger facilities is balanced against the demand for luxurious appearance — *and materials which take and hold color well.*

In order to obtain the rich colors of deep-pile, rounded-loop Stratotweed — which weighed 18½ ounces instead of (*please turn*)

the originally-prescribed 10 ounces — it was found possible to effect a "designers' compromise" by substituting a 10-ounce upholstery on the rear area of seats, where there is no body contact to "wear" the material. While luxurious 54-ounce carpeting with a one-eighth-inch foam rubber backing has been introduced, lightweight plastic flooring is used for galleys and washrooms.

The pilot's cockpit presents a particular problem in airplane color planning. Ideally, the cockpit would be black for night flying, to avoid eyestrain from excessive contrast. But that would leave a daytime contrast of black interior against bright sky-blue and cloud-white. Best solution has been a maroon flooring and gray sidewall, which reflect daylight colors and darken under the red light used at night.

Airliners do without exterior colors to save the weight of paint. Also, aluminum gives maximum visibility for planes on ground.

In the days when plane exteriors used color, an amusing story was told of a passenger who nervously observed a faint green tinge on his skin. (The color was caused by the play of light cast up from the color on the plane's wings, cast onto some interior color.) A quick-witted hostess thrust a sheet of white paper before the passenger, who noted that it, too, took on a greenish tinge. The passenger felt better after that.

Upper exterior portions of planes should preferably be in light bright colors, so as to be readily visible in the event of a forced landing on dark earth or sea. For sea planes, international orange — the complement of sea blue — is best. Dark colors are best for underside of planes, to contrast against bright sky — a certain vermilion offers maximum visibility.

* * *

Back in the fall of 1945, I queried returning veterans on whether they would wait an extra few months in buying a car if by waiting they could obtain the automobile in colors of their own choosing. Over 50 per cent said they would. In the scarcity market that has held sway since then, such intentions have doubtlessly been by-passed. But almost 30 per cent of present car owners have indicated, in a recent survey, that color and design changes would be desired when they purchased their next model.

Automobiles, more than any other transportation medium, have a tremendous interest in color, because in automobiles the factor of private, individual ownership enters the picture. For this reason, the automobile industry was first in the transport field to respond to color demands.

Back in 1926, automobiles were furnished in as many as eight separate colors. Upper and lower body, belt, window reveals, mouldings, stripes, fenders and wheel areas were endowed with strongly accented hues that nullified any possibility of unity in appearance. It required 30 days to finish a car in the days of slow-drying paint and varnish, and cars were parked outdoors for this period, so that an ill-timed flight of birds often required a repetition of the process. Motor manufacturers offered dozens of styles, and changed color schemes every 90 days to beat the trade.

The depression period ended that mad scramble for colors. In time of financial retrenchment, car owners veered back to the dictum of practical old Henry Ford — "Any color as long as it's black." During the slump people wanted new cars to be inconspicuous, and old cars to hide their age by neutral color treatment. In 1928, green was the favorite color, and black ranked fifth; by 1933, the positions were reversed.

"Not the rainbow in the sky, but the spectrum on the road will be the signal of recovery," quoth the pundits of the Baltimore Sun.

Meanwhile, the motor car manufacturers were doing some solid thinking about economy in production. With the aid of constant survey of consumer preferences, the Du Pont Company slashed the number of automobile colors from 13,000 to 600.

The expected rampage of browns, maroons, cobalts and azures did not quite materialize, but by 1935 the depression-era compromise favorite — blue — ranked first among men as women favored red.

One woman described how shrewd car salesmen pushed the red. "A salesman came to my house with the message, 'As soon as this car came onto the floor, it reminded me of you. Frankly, this red is not for everybody. Most people would be afraid of that conspicuous color, but I knew instantly — it's your car.' "

She couldn't resist the appeal of a car that was "just the color for you" — but not for everybody!

But the carefree boom days never returned. Gunmetal shades went up to 35 and 40 per cent of production in some plants. Regional differences continued to make their weight felt — black, dark grays and blues and maroons in New England, light hues in California, a mixture of light hues and dark tones in the Middle West. The regional findings were a truer test of "proper" colors for cars; they reflected actual conditions of outdoor light and color backgrounds in which the cars were seen on the highways.

Technical advances made a more mature treatment of automotive color problems possible. New, lustrous finishes cut the time for exterior finish drying from 30 days to 30 minutes. Colored plastics were gradually introduced into the hardware — the steering wheel, the gearshift handle, horn buttons, instrument panels and doorknobs. The glittering instrument panel of today's lowest-priced cars puts to shame the dashboard of a 10-year old Cadillac!

Fashion in Autos

For a time, the fashion industry played a part in the selection of automobile colors. Metallic dresses, popular in the mid-Thirties, were derived from the same aluminum base that was used to produce metallized car colors. A "fish-scale" adapted from the material used in imitation pearl ornaments, was ground into automobile finishes to produce an iridiscent effect. Motor car manufacturers began to pay attention to such events as Paris fashion openings, European displays of automotive elegance at Monte Carlo, and technicolor reproductions. A seasonal element was introduced in auto production, in imitation of department store dress salons.

Shortly before the war, the trend toward two-tone auto bodies set in. Gray rose to second place on the production line . . . it led among the colors shown at the 1940 Automobile Show at Grand Central Palace.

Pre-Testing the Public

When the day comes that automobiles are *sold* again, every trick in color appeal will be put to use. Upholstery, particularly, will be created according to the taste of the buyer. Tufts and buttons, and rough-edged pile fabrics, will be avoided as offensive to wearers of lightweight clothing. In the past year, smooth-woven nylon has largely replaced less comfortable rattan as material for automobile slip-covers.

More than any other industry, the automobile manufacturers have gone to the public with survey after survey to determine personal tastes. One company tallied 185 separate design items in a single model which were attributable to suggestions made in public polling.

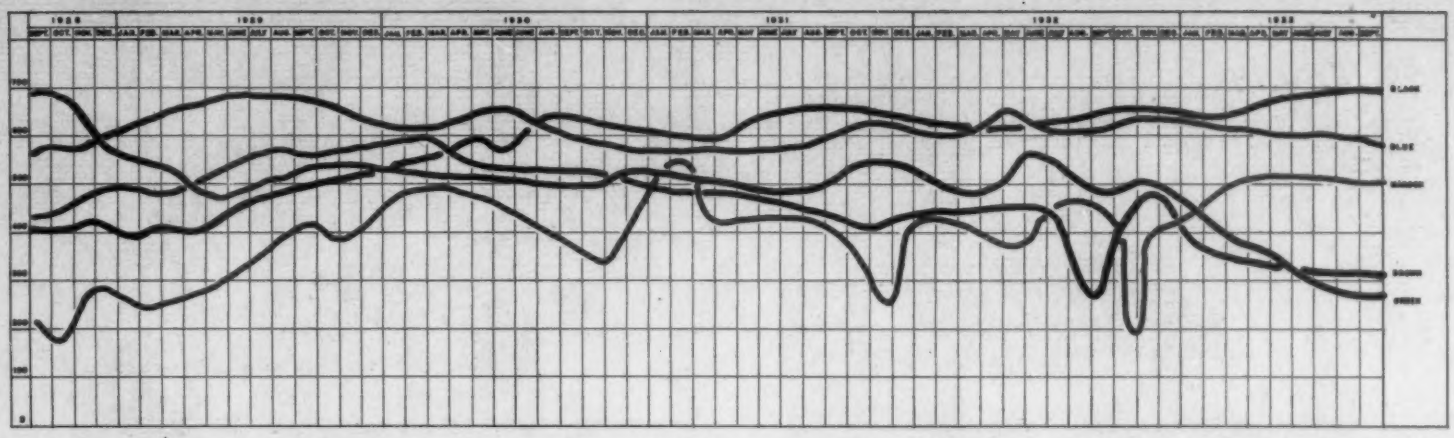
The same company, with the most extensive program of canvassing public color preferences, led the field in nine out of ten pre-war years.

* * *

Buses, like automobiles, have been taken to the testing-hall of public opinion on occasion, although with less reason. In the cities, local buses are used by the public not because of their attractive appearance but because the public needs a way home.

Yet it is interesting to note that in recent years operators in Paris, Washington and Kansas City have given the public a voice in the selection of bus colors.

The first of these tests was made in Kansas City, and the passengers voted for a cool and pure apple-green.



Auto Color Preference Shift from Boom to Depression. Chart showing the relative popularity of leading automobile exterior colors from the height of the boom of the 1920s to the depth of the depression shows quickly how taste in automobile colors shifts with the change of economic conditions. Note how black increased in favor as times grew worse, while green lost popularity as the business boom ended.

Bus officials wondered whether there was any connection between the mid-summer weather and the results of the balloting. By January, they feared, passengers on freezing street corners might find more eye appeal in a warm yellow. Curiously enough, the balloting in Washington, conducted in December, returned a warm tan with maroon trim as favorite!

Local buses have some peculiar problems. Officials of one company warned a color engineer: "*Don't give us a color that makes the bus look big! It gets the city motorist angry at us if our buses look bulky!*"

Buses may have a most practical use for color. In many cities, buses traveling many routes converge on certain busy downtown corners. By using a variety of trim colors in designs for front and sides, they may indicate the particular route which each bus travels. Passengers huddled in doorways in stormy weather would not have to rush out into the rain to see if an oncoming bus is the right one.

Interior color planning of buses should, like post-war planes and trains, introduce upholstery fabrics in two colors in different areas to create a more interesting appearance and break up the monotony of a single, large, cramped room. Ceiling colors should be in a receding hue, to increase the aspect of height.

One of the most successful interior treatments of a bus employed a soft receding blue on its ceiling so effectively that passengers were known to ask the driver, after a hasty glance within, "Is this a double-decker?"

Probably in no other mode of travel does the passenger's eye move so frequently from the rear of the seat ahead to the view from the window as in the intercity bus. Perhaps no other carrier, therefore, requires as much care in the selection of the right upholstery colors.

Some years ago the National Safety Council and education officials selected a light shade of chrome yellow as standard for school buses — to lessen the danger of collisions. This yellow has the quality of high light reflection both during the daytime and under headlamp lights at night; it contrasts strongly both with the white of concrete highways and with the purple-blue of the skyline.

* * *

With all the increased knowledge of color in relation to safety, smartness and prestige, it is amazing that some truck operators have lagged in the application of these principles to their fleets. None have been more backward in this respect than the United States Post Office and certain express and delivery services.

Dull olive drabs and browns are used because they show a minimum of dirt. They also lessen the interest of employees in maintaining the trucks, and they pass up excellent opportunities to advertise the speed and quality of the delivery service.

The great variety of industrial enterprises operating their own trucks is matched only by the variety of impressions that colors can create. Dignity for merchandisers of luxurious items, sanitary cleanliness for food industries, gaiety for florists' delivery trucks are all expressible in color. Color can make vehicles appear larger or smaller, as the product or service demands. Always the truck should as far as possible fit into a program of color integration involving store design, package, or product.

* * *

Railroads, which burst from their decades-old drab hues during the Nineteen-Thirties, are feeling their way toward a new color deal.

Curiously enough — and in direct contradiction of a trend in automotive colors — the railroads all over the world blossomed into color during a deep depression . . . perhaps, because of it.

And so we saw the splash of color on the rails:

The "Rheingold Express," which matched violet, silver-gray, ivory and gold-leaf in a style calculated to stir a Wagnerian response;

The maroon hue of England's "Flying Scot";

The luxury blue of the Paris-Riviera "Blue Train";

The gold-green-and-black of Australia's "Overland Express";

In the United States, the combination of polished copper, blue and Continental Army buff of the Boston and Maine's "Minute Man," recalling Revolutionary days.

With the era of streamlining — more properly described as "stream-styling" — color replaced the drab grays and blacks of familiar trains. Not only was color assigned the task of winning friends for rail travel — it was also calculated to stir maintenance help to do a better cleaning job!

With good reason! C. & O. reported traffic up 87% when "The Cincinnatian" went streamlined.

Attention has been directed to such luxuries as club cars, lounge cars, etc., and the colors inside were such as "dove-taupe," "Malacia pink," "Bay Ridge gold," and a host of pastels. Beautiful colors . . . but not *railroad* colors.

For the truth of the matter is that railroad colors are governed by some practical considerations — above all, the maintenance problem. No other mode of travel is as subject to dust and soot. No color appeal to passengers merits a requirement for three to four man hours of cleaning operation daily for each car, as one de luxe train demands.

Secondly, the railroad coach suffers more abuse from passengers than any other type of transport. Weary passengers on long journeys kick against the rear of the seat before (*please turn*)

(A) ATLANTIC COAST LINE *(B) FLORIDA EAST COAST* *(C) SABO*

Five modern Diesel locomotives illustrate through their color treatment the application of the five color principles by which maximum contrast is obtained: **(1) Use of a color with its complement; (2) Use of colors of high and low value; (3) Use of weak and strong colors; (4) Use of warm and cold colors; (5) Use of colors in large and small areas.** In this illustration —

(A) Atlantic Coast Lines, employing **(2), (3)** and **(5)** conveys an impression of length, and of suave distinction. Dark color at base creates an air of stability by making it appear that weight is concentrated in lower portion. (B) Florida East Coast obtains maximum visibility through use of bright

Color on the Move (continued)

cars. It is hardly a break in the color pattern to offer different colors in different coaches. The railroads can make interiors of coaches more pleasant by diversifying upholstery colors in each, selecting hues which harmonize and which reveal a minimum of soilage.

Train exteriors have the same practical color problem. Brilliant-hued Diesel locomotives justify high initial costs because they are "available" for service 90 per cent of the time. However a color that chalks or cracks too frequently, requiring roundhousing for refinishing, defeats the fundamental advantage in servicing which permits two Diesels to replace five steam locomotives.

One writer described the pleasant surprise that awaited her when a shiny chromium and red train pulled into the station to take her on a journey. Her spirits would have soared less if the red coaches that looked so "happy and alive" bore weathermarks from use, and if blue-upholstered seats appeared gray from dust.

* * *

Ocean-going vessels have to date accomplished little of a personalized, original nature. Hulls are painted in dull gray or black to show a minimum of soilage, and lessen the frequency of arduous and expensive repainting jobs. But that may soon be changed. **Because a light green or white surface attracts far fewer barnacles than the familiar dark colors of ship bottoms, American shipping may see a $100,000,000 reason for a color revolution afloat.**

Ship interiors have shown the same minimum of imagination in color. The objective of the major ocean liners has been to achieve a close approximation of hotel-type interiors — and the result, generally, is an elaborate melange with about as much personality as the public room of a bank. This is, in part, due to the conditions peculiar to ocean travel — greater space and freedom of movement, central recreational areas for all passengers, and the need for constantly reassuring landlubbers on the safety of ocean vessels. As a result, period furnishings are frequently employed for their connotation of stability, and colors are selected from the standpoint of general decorative appeal without reference to the marine aspect.

* * *

Travelers' accessories have moved more rapidly than transport equipment to "color up" for the conditions of journeying. Fashion stylists have created travel wardrobes, and many leading stores have established special shops to cater to this trade. Luggage, lightened in weight under the impetus of aircraft weight limitations, has been lightened and brightened in color as well.

More slowly, because its problem is cast on a bigger scale, we may expect to see transport vehicles of all types respond to the color requirements peculiar to each.

Whether for plane, train, motor vehicle, or steamship, an appropriate color scheme must be built on the spot, after all considerations of construction limitations, operating environment, illumination, illusion desired, and general color preference of the majoriy of travelers has been authoritatively established by a practical survey.

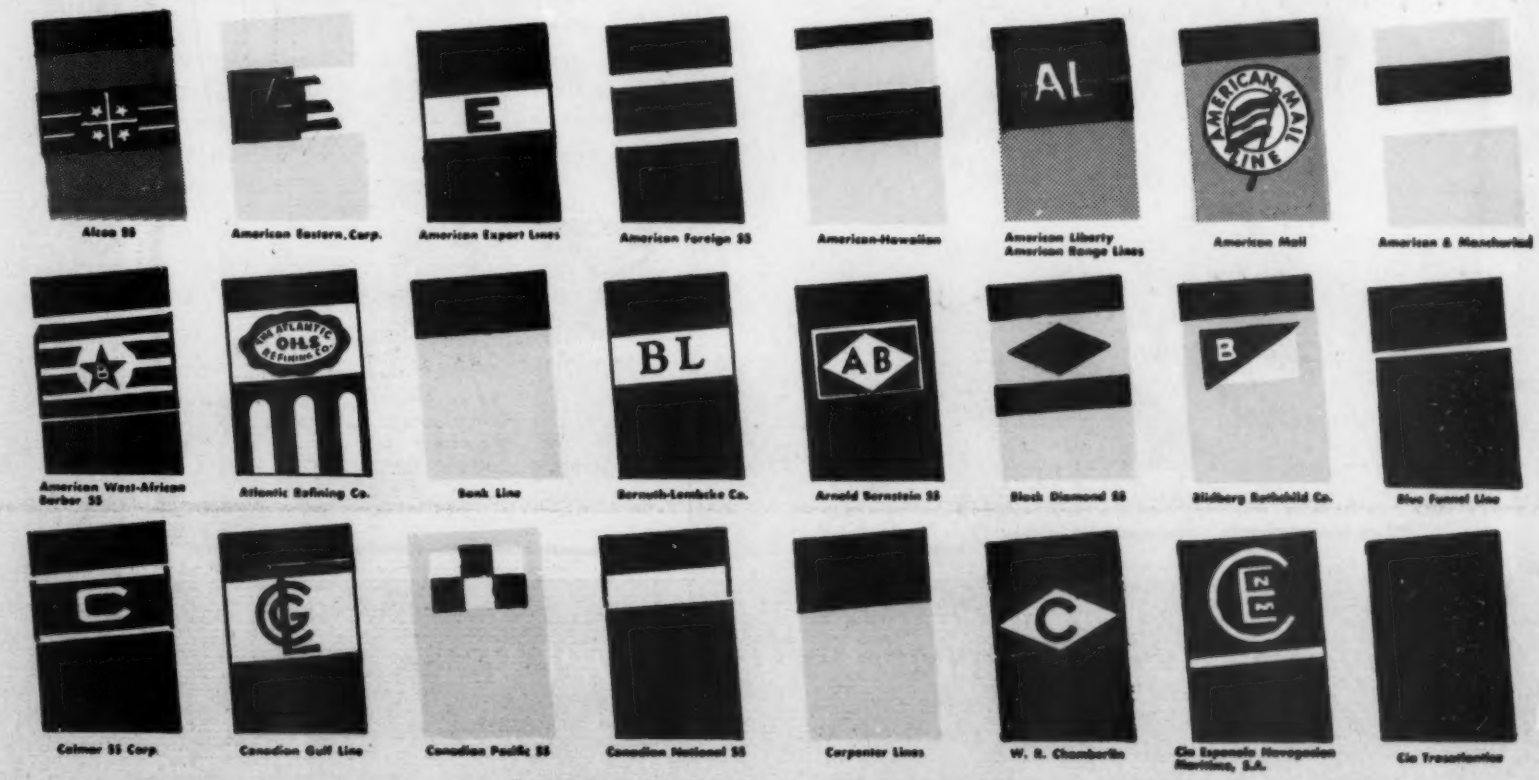
When this technique is more widely adopted, we will see color on the move, attuned to the needs of the movement concerned.

— HOWARD KETCHAM.

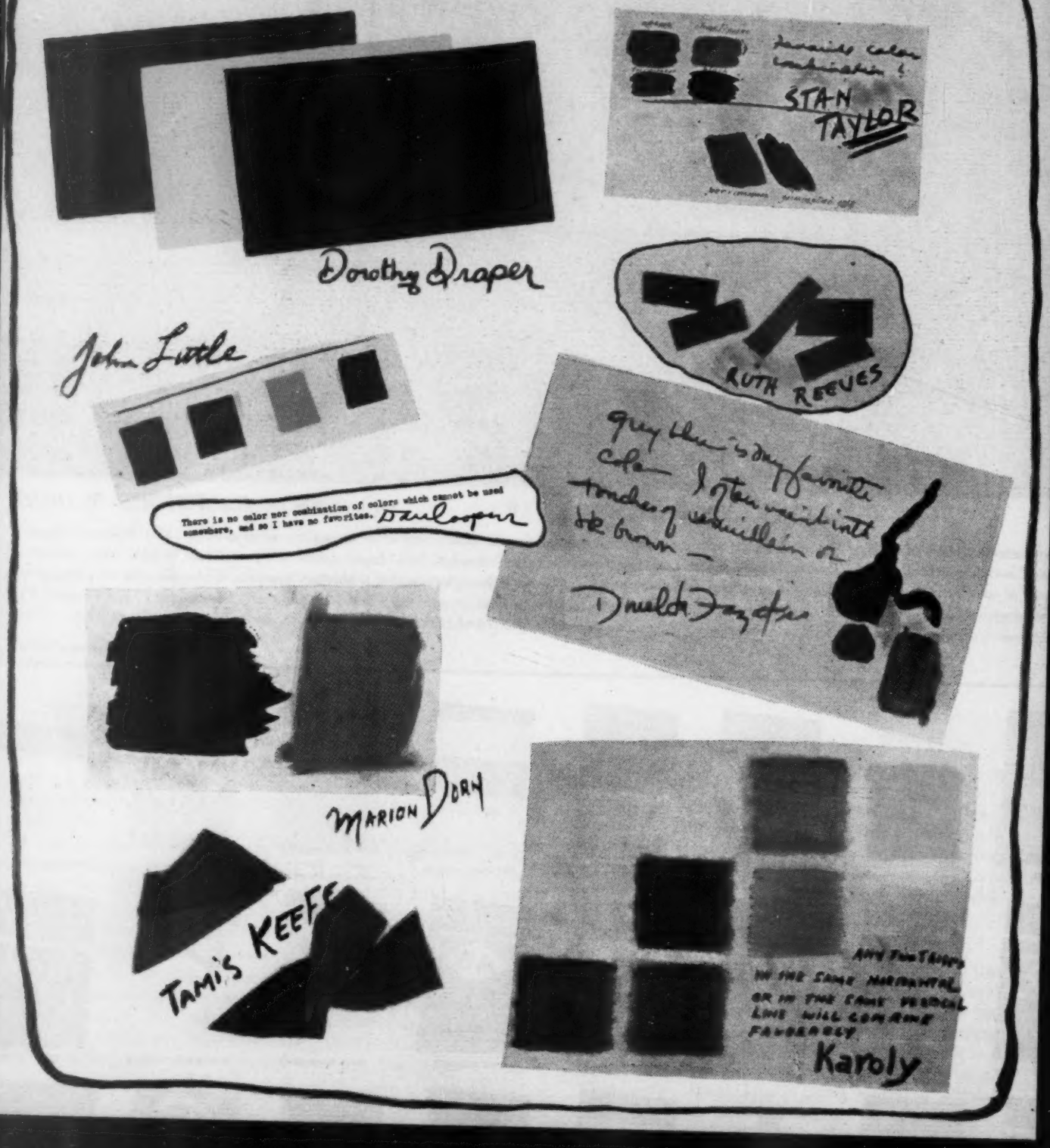
SEABOARD *(D) SOUTHERN* *(E) BALTIMORE & OHIO*

colors, with contrast effect only from **(5)**. Color pattern creates impression both of width and height. Dark base gives air of stability. (C) Seaboard appears narrow and low-slung, through use of dark color in upper area. Contrast is obtained through **(2)**. Light values at base add to height, create effect of high center of gravity. (D) Southern lacks contrast against countryside, has good light reflection for night-time contrast. Yellowish cast to green gives contrast through **(4)**. (E) Baltimore & Ohio appears dignified and conservative through selection of color. It obtains contrast through **(2)**, **(4)** and **(5)**. It seems big and solid, does not look top-heavy despite light base, because of large area of dark value extending to lower sides.

Photo courtesy Electromotive Corp., La Grange, Ill.



House flags of various steamship lines and company-owned vessels are pictured above on smokestacks. These are commonly viewed against a background of sky, purplish blue in bright weather and gray weather. Which insignia use color and design wisely? which fail to assist ease of recognition?


Dorothy Draper
STAN TAYLOR
John Little
RUTH REEVES
There is no color nor combination of colors which cannot be used somewhere, and so I have no favorites. Dan Cooper
MARION DORN
TAMIS KEEFE
Karoly

DESIGN AND COLOR QUORUM . . .

Nine Prominent Designers Express Their Views on the Trend in Printed Decorative Fabrics . . . agreement on high colors and bold designs although interpretations vary.

MARION DORN

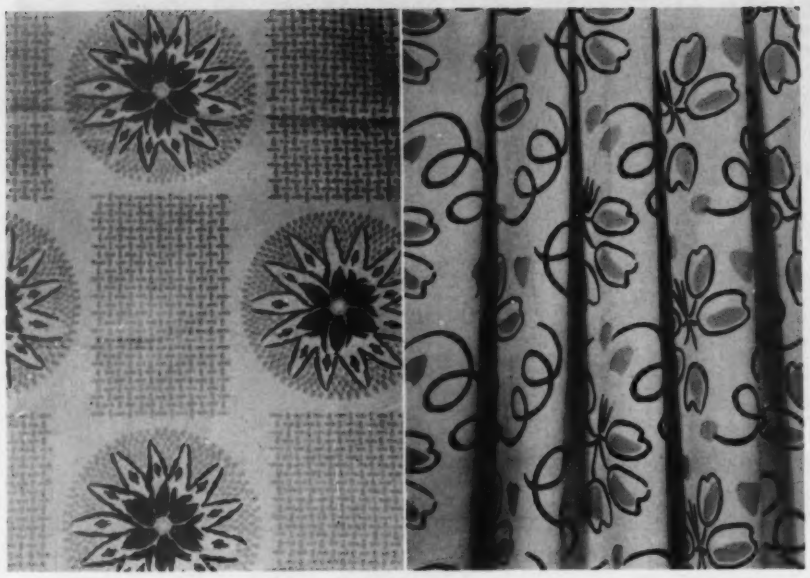
"Printed fabrics, when used in modern interiors, tend to soften the severity of line, adding color and interest. I have observed that the type of design that becomes so quickly dated is that which strives to be different, while that which is good lives on. We in America like to recognize familiar forms in design, and so a fresh treatment of a rose will elicit more response than will an abstraction."

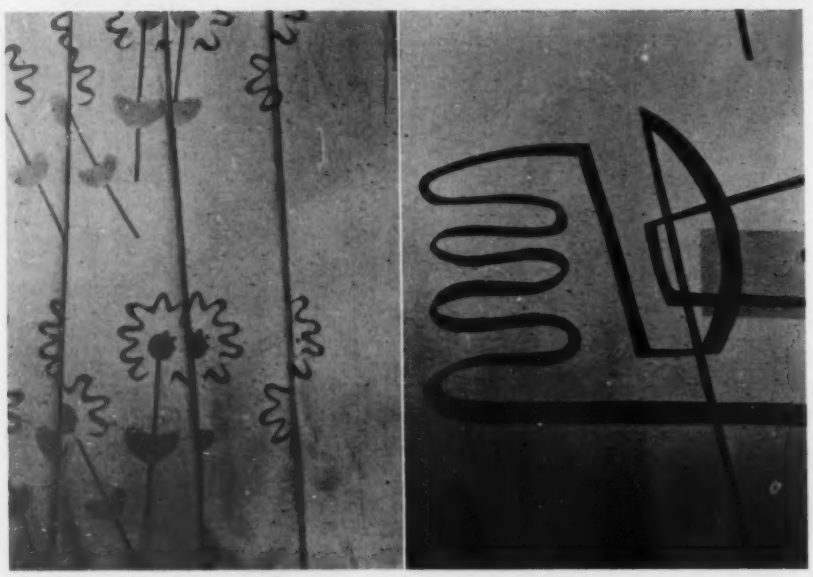
STAN TAYLOR

"The trend is away from the stereotyped, toward greater freedom of expression. This does not mean, however, that restraint should be thrown to the winds. Far from it. The straight lines of modern furniture demand patterns that can be centered. In bold, splashy designs, like line to be silhouetted against mass, weight equalized with color."

TAMIS KEEFE

"Whenever possible I like to introduce the three dimensional in prints. I like 'depth' in a fabric. I also like the introduction of current objects treated artistically. Warm colors are my favorites — beige, tan, brown with the addition of some cool color for relief."





DESIGN AND COLOR QUORUM (*cont.*)

DAN COOPER

"It is my conviction that the correlation of fabric design with furniture design and interior architecture is most important. In designing a room, it is envisioned as a whole, with the upholstery and drapery fabrics playing just as important a part as any other factor. A fabric design, however, need not be limited to one use only. Depending on the type of fabric used together with the color scheme, it may be adapted to use in a mountain cabin or a lady's boudoir."

DONELDA FAZAKAS

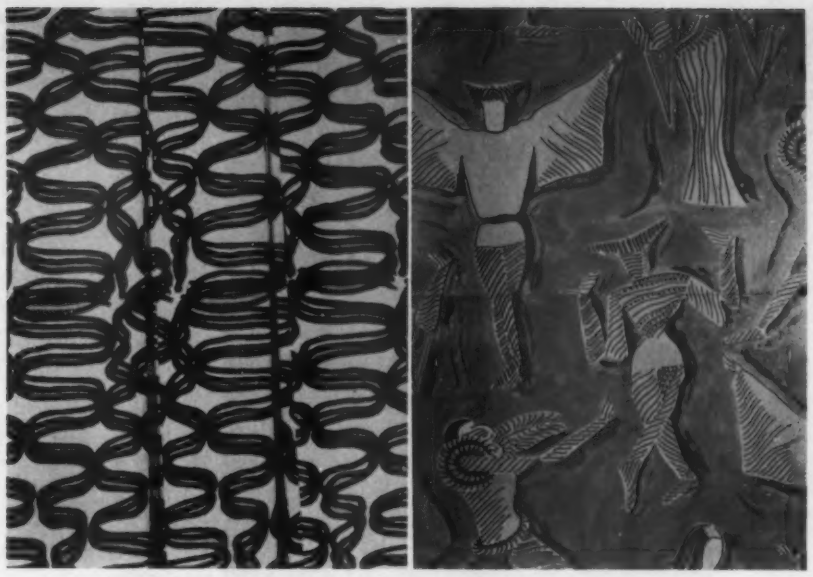
"Although, generally speaking, there is a decided trend toward the use of abstract forms in decorative fabric design. I believe that the use to which the fabrics will be put indicates whether the scale shall be large or small, the pattern static or flowing, the color vibrant or quiet."

JOHN LITTLE

"I feel that there is a distinct trend toward abstract design and pure, strong color in decorative fabrics. Contrary to popular feeling, I believe that fabrics of this kind need not be restricted to use with furniture of modern design any more than a modern painting would be. When sound designs of any period are mixed, the effect produced is timeless and classic."

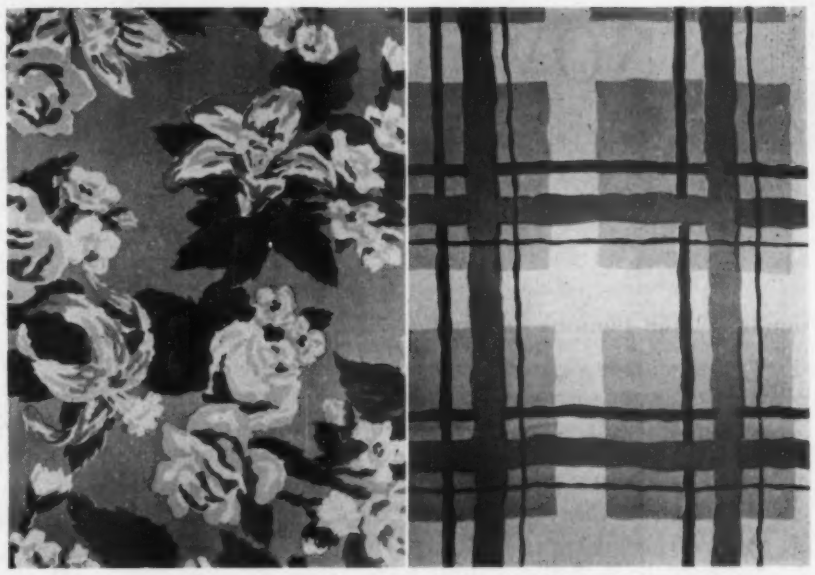
FREDERIC KAROLY

"Contemporary art to my way of thinking has had the greatest influence on decorative textile design, with the emphasis placed on the abstract treatment of natural forms. The trend toward darker-toned walls permits the use of drapery and upholstery fabrics of bold design and clear, strong color."



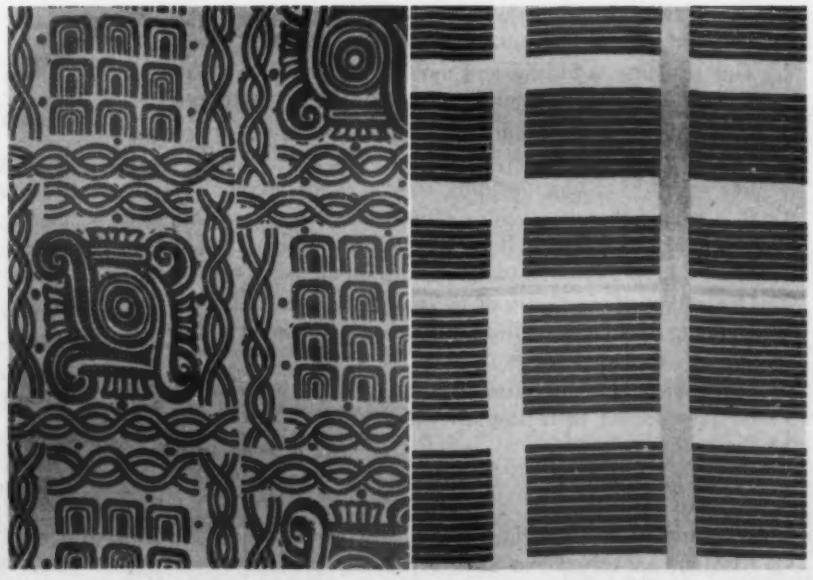
DOROTHY DRAPER

"The trend toward bigger, bolder design and brighter, fresher color in decorative fabrics which I launched before the war and has been steadily gaining in popularity all over the western hemisphere, still continues to be the guiding force in decoration. Having seen what warmth and gaiety can be achieved in this way, the return to the tight, drab type of design is hardly likely."



RUTH REEVES

"Decorative fabrics tend to be much more architectural in design than formerly — a natural trend following the newest developments in architecture and furniture design. Color, inspired by the high colors launched by the dress industry several seasons ago, is becoming more brilliant, with the Mexican pallette of bright pastels combined with dusty charcoal tones perhaps the one most favored."



KNOWLEDGE

Conducted by Dr. George E. Linton

Names of Men Famous in Textiles . . .

1. Paul Muni gave an excellent portrayal of the Saviour of the Silk Industry . . . LOUIS PASTEUR.
2. One of the truly great pupils of Pasteur is known as the Father of the Rayon Industry . . . COUNT HILAIRE DE CHARDONNET.
3. These two noted brothers from Memphis perfected the automatic cotton picker . . . RUST BROTHERS.
4. A man whose name reminds one of a letter in the alphabet perfected the fly shuttle . . . JOHN KAY.
5. The Elihu Club at Yale University was the home of the inventor of the cotton gin . . . ELI WHITNEY.
6. This textile invention was named in honor of the wife of the inventor . . . JAMES HARGREAVES and his spinning jenny.
7. This machine, a hybrid and most important in the manufacture of yarn, was invented by . . . SAMUEL CROMPTON.
8. A minister and his wife are responsible for this very important machine used in the textile trade . . . MR. AND MRS. WILLIAM LEE and the knitting machine.
9. It is seldom that an inventor produces two major machines in any field of endeavor. It was accomplished, however by . . . EDMUND CARTWRIGHT and his power loom and comber frame.
10. One of the predecessors of the mule frame of today was the spinning of yarn by roller action on a machine. The inventor was . . . RICHARD ARKWRIGHT.
1. The warp in weaving fabric is kept at the proper width by the temples on the loom; an invention of . . . IRA DRAPER of Massachusetts.
2. The important drop-box loom widely used today is an invention of . . . JOHN KAY.
3. By watching his daughters wash and comb their hair, this Alsatian conceived the idea for combing wool fibers into worsted stock. The machine known as the comb is an invention of . . . JOSUE HEILMANN.
4. A Civil War general and his famous brother-in-law invented the sewing machine . . . ELIAS HOWE and GENERAL NATHANIEL BANKS.
5. The automatic bobbin changing loom is the invention of one of the greatest loom men of this country . . . J. H. NORTHROP.
6. The circular knitting machine is the invention of . . . M. I. BRUNELL.
7. Two partners invented knitting by means of latch needles . . . TOWNSEND and MOULDING.
8. The ring spinning frame is an invention of . . . JOHN THORP.
9. The quadrant on the mule spinning frame was invented by . . . ROBERTS.
10. The Father of the American Cotton Industry is . . . SAMUEL SLATER.

The Measure of Things . . .

1. When a woven fabric has the same number of ends as picks per inch it is known as a . . . square cloth.
2. A point in the buying of cotton is . . . 1/100th of a cent.
3. Worsted top contracts are made in lots of . . . 5,000 pounds.
4. Four-quarter or 4/4 goods would have a width of . . . 36 inches.
5. A 6/4 goods, therefore, would be . . . 54 inches wide.
6. The number of yards in one pound of a Number One cotton yarn used to figure the size or count of any cotton yarn is . . . 840 yards.
7. The number of yards in one pound of a Number One worsted yarn used to figure the size or count of any worsted yarn is . . . 560 yards.
8. The Run or Boston method used to figure the size of wool yarn sizes or counts of yarn has a standard of . . . 1600 yards in one pound of the Number One yarn.
9. The number of yards in one pound of a Number One Cut or Philadelphia system of figuring woolen yarn is . . . 300 yards to the pound of a Number One yarn.
10. The unit weight in figuring a silk contract is in units of . . . 1,300 pounds.
11. Silk is the only filament or fiber that is spun in a natural way. In one pound of a Number One silk filament there would be a total yardage for figuring purposes of . . . 4,464,528.

Cotton Categories . . .

From the various grades of cotton come fabrics which are capable of supplying all man's textile needs. Economists have estimated that three quarters of the world's raiment is made of cotton or cotton derivatives. Here are some of the more popular types of cotton fabrics and their descriptions.

BATISTE: A light transparent cloth of fine quality yarns used for better grade dress goods and lingerie.

BEDFORD CORD: A heavy fabric with a line or cord running lengthwise. It is extremely rugged and is used for sports clothes.

BROADCLOTH: A tightly woven, lustrous appearing cloth, made with a plain weave. It is used for shirtings and kindred items.

CALICO: A lightweight, closely woven fabric of plain weave with printed designs. Used for housedresses and aprons.

CHAMBRAY: A plain woven, medium weight cloth with colored

warp and white filling, producing a solid color effect with a gingham finish. Used for men's shirts, women's dresses and children's rompers.

CHINTZ: A fine, plain woven cloth with a glazed finish, printed in bright colors on white or colored grounds. It is used for sportswear, summer dresses, drapery and upholstery.

CORDUROY: A pile fabric characterized by warp-wise ribs. It was originally used for liveries and boys' play clothes. Now it has become a sportswear and coat fabric and in its finer wales is used for dresses, negligees, etc. Lately corduroy has been used for upholstery and drapes.

CREPE: A fine fabric with crinkly surface achieved by using yarns of extra twist. Used for dresses, waists and negligees.

CRETONNE: Heavy cotton cloth with a dull finish, printed in bright patterns. Mostly used for drapes and furniture covers. It has made inroads into the apron and housedress fields.

DAMASK: A satin weave cotton fabric with large designs. It has a glazed finish. Used for table cloths and napkins.

DENIM: Heavy woven twilled cotton with great strength and washing quality. Used for overalls, slacks, playclothes, etc.

DIMITY: A sheer, soft muslin woven loose in plain weave and dotted with a pattern in a heavier yarn. Used for summer curtains and summer dresses.

GABARDINE: A strong, close-woven twilled fabric showing diagonal cords. It is used for sportsclothes, coats, suits, slacks, and play shoes.

GINGHAM: A light, durable wash fabric in plain weave; yarn dyed in solid colors, checks, plaids and stripes. Used for dresses, children's clothes, playsuits, hats, etc.

LAWN: A sheer lightweight cotton, usually white but sometimes printed in bright colors or tinted in pastels. Used for lingerie and dresses.

MADRAS: Originally made in India. A lightweight cloth of exceptional wearing quality, usually with colored warp stripes on white grounds. Used principally in men's shirtings, now it makes a debut in women's blouses.

MARQUISETTE: A lightweight dressy fabric of open construction used for sheer curtains and summer dresses.

MUSLIN: A soft, fairly sheer cotton fabric used for sheets and pillow cases.

NAINSOOK: Similar to lawn in count and construction. May be finished either soft or crisp, with plain or corded effects. Used for underwear, curtains and infant's wear.

ORGANDY: The crisp, transparent finish on this sheer muslin makes it ideal for summer evening frocks, blouses and hats.

PERCALE: A closely woven, fine quality cotton either plain or printed. Used for sheets and pillow cases as well as dresses, shirts, aprons and playclothes.

PIQUE: A heavy durable cotton with cross-ribbed or figured effects, obtained thru two sets of warps. Used for sportswear, blouses and vestings.

POPLIN: Fine weft-wise ribs characterize this plain woven dress fabric.

SATEEN: A lustrous finished, satin weave cotton used for linings.

SEERSUCKER: A lightweight, crinkly cotton with stripe effect produced by slack tension of warp threads in weaving. Used for men's suits, women's suits, slacks, dresses, uniforms, rompers, beach wear, etc.

TERRY CLOTH: A turkish toweling effect caused by the uncut pile. This high nap or pile gives it a soft finish and absorbent quality. Used for sportswear, towels, robes, beachwear, etc.

VOILE: A lightweight transparent cotton, made of highly twisted yarns. Comes in a variety of finishes for dresses.

Notes of Interest . . .

Wool can be treated chemically, in the white, so that it will resist dyes, by using tannic acid, antimony salts and tin crystals, but the process is hard to control, and rather expensive if the dyer is not familiar with it. The resist, or shade, cannot be doctored or put into black. A batch is hopelessly spoiled, and the material is worth very little if not successfully done in the first operation.

A method of producing socks and three-quarter hose with clean welts by use of alginate yarn is accomplished by knitting this yarn, instead of the usual draw thread, into the welts as the "chain" of socks comes from the machine, thus leaving each sock linked to the next by a few courses of alginate. The socks are separated by cutting the alginate, the toes then being linked in the usual way. When the socks are placed in a modified scouring mixture prior to drying and finishing, the alginate dissolves and leaves the socks with as clean welts as those obtained by the draw thread method.

A new industry has been organized to produce hard fibers from the stems and roots of heavy palmettos. The fiber will be prepared for use in the manufacture of cordage, heavy fabrics and hard fiber suitable for upholstery.

Papain, which is obtained from a tropical tree in much the same way as crude rubber, exerts a solubilizing action on proteins and has been successfully used in de-sizing textiles containing gelatin and similar substances. It will also impart a non-shrinking, non-felting finish to wool, and will make wool fibers very silky, but with a loss of weight.

Regenerated fibers are those which need, for their origin, some naturally growing organic compound for the parent substance, and thus depend on some animal or vegetable life for their production. Viscose, acetate and cuprammonium rayons fall under this heading. Synthetic fibers are those made by a process of synthesis from elementary substances, most of which are of mineral origin. Nylon is an example of synthetic fibers.

Peroxides have been used in textile bleaching processes for many years. When, in 1808, hydrogen peroxide was first discovered, it was appropriately called oxidized water, which was a good description, since when it decomposes it forms water and oxygen. In fact, grass bleaching, the oldest known bleaching method, was actually a peroxide bleaching, for oxygen from the air, in the presence of moisture, was acted upon by ultra-violet light to form minute quantities of hydrogen peroxide.

South American fleeces are graded and tied with a string which should be cut and pulled out by the knot, and dealt with in exactly the same manner as Australian and New Zealand fleeces. As a rule, domestic fleeces are tied with seven or eight strings, all of which should be cut, and each pulled out separately. Great care must be taken to thoroughly shake out the fleece, as these wools are liable to be touched with gray around the neck and locks, and often contain vegetable matter. After thoroughly shaking, place on the sorting board.

Direct manufacture of colored viscose rayon yarn is likely to increase because such yarn is convenient to weavers and knitters of fancy materials, especially if it is desired to avoid subsequent wet-processing of them. However, experiences of rayon manufacturers in the production of such colored yarn have shown that there are snags. Up to recently the various dyes could not merely be added to the viscose spinning solution, but that obstacle has now been overcome.

DR. GEORGE E. LINTON

FIRE-FIGHTING FIBERS

The development of fire-resisting fabrics is traced from its early beginnings.

Epidemics of unbelievable hotel and restaurant fires in Boston, in Atlanta, Chicago and many other cities made us realize our complacent carelessness in fire protection. Finally we were galvanized — and that is the word — into doing something. State legislatures passed laws — fire inspectors kept both eyes open — and the public wondered where everyone had been.

The glory of America is that there are always some far-seeing, thinking scientists who are two jumps ahead of the state legislatures. In this case they were not much more than two jumps ahead, however, for the development of fire-fighting yarns, begun before the war, had to be for many years devoted to war efforts. But at this moment there is no excuse for hanging flammable fabrics in any "place of public assembly," as the legal phrase goes. Hotels, restaurants, night-clubs, schools, trains, planes, ships and buses now have the benefit of available and attractive non-combustible fabrics, and one hazard at least can be removed.

* * *

As usual, man goes back to the earth for protection. There are two proven fire-resisting fibers — asbestos and fibrous glass. Both are among the most romantic and the oldest substances in the world, and both are inoculated against the danger of fire.

Asbestos — the world's oldest fiber — is rock-twisted by early volcanic action into amazing layers of silky fibers which are completely incombustible. This property has been known for centuries. It was an asbestos wick in a bowl of oil that made possible the perpetual flame in early Roman temples. It was an asbestos cloth, the funeral dress of kings, which wrapped bodies of the honored dead for cremation and preserved ashes for funeral urns. It was an asbestos tablecloth, thrown into a roaring fire after a banquet, and retrieved fresh and snowy-white, which convinced certain Moslem guests that it would be unhealthy for them to wage war against such a magician as their host, Charlemagne the Great. But only within the last half century have organizations like the Johns-Manville Company and Keasbey & Mattison Co., begun to mine this magic mineral, scattered all over the world (with about 75% of world deposits in Canada), and gradually transform it into usable life-saving material.

Glass, too, is of ancient origin, probably dating back thousands of years to the discovery by some nomadic tribesmen of a molten, viscous substance under a campfire built on sand. In playing with it on the end of some implement, and watching the hardening and shaping of this mud-pie, spun glass was probably born. But again, it is only in the last two decades that tireless technicians of Owens-Corning Fiberglas Corporation have learned to fashion brittle glass into the delicate, pliant texture of the present yarn. Fiberglas has dimensional stability, and both asbestos and glass have valuable insulating and acoustical properties.

The third current fire-fighter is a chemical solution usually based on borax — back again to earth — which can be impregnated into any organic fabric. This is handy, but it has the disadvantage of being impermanent and hence unreliable, and of involving somewhat expensive upkeep. However, these fluids pass the requirements of many bureaus of standards, and yarns so treated are especially useful when woven in combination with either asbestos or Fiberglas to add tensile strength or easier handling to the cloth.

* * *

There are on the market many attractive versions of these fabrics, although the firms who have had the patience to overcome the difficult technical problems are relatively few.

Thortel Fireproof Fabrics are one of the pioneers, purists and specialists in the development of Fiberglas for decorative uses. They show charming dobbie weaves in solid colors, striking prints on satin, two-toned jacquards. Examples are seen in the most important dining-rooms of the Waldorf-Astoria in New York, and in other hotels, schools and theatres from coast to coast. The Chicago school system has been particularly progressive in adopting these fabrics. Since the spaces to be covered are usually in public rooms of large proportions, most of the prints are big in scale and impressive in pattern.

At Waverly Decorative Fabrics, one may find a selection of Fiberglas materials in polka dots and stripes — some printed, some woven — on an interesting twill background. They are eminently suitable for smaller, more intimate restaurants or rooms, and are also suggested for shower curtains. They also show some good splashy prints, and flock-printing is another splendid idea.

Gallagher and Hughes have developed a ratine effect in an all-Fiberglas Jacquard which has great possibilities and other fabrics of glass combined with flameproofed cotton or worsted.

Turner, Halsey Co., executors of the Fiberglas hangings keyed to the baroque motif of the charming grill at the Hotel Sherry-Netherland, have a wide selection of combination-woven prints in designs to suit various moods or periods.

Fiberglas fabrics should not be subjected to the abrasion of a washing-machine, but they can be sponged or dry-cleaned by the process suggested by the National Institute of Cleaning and Dyeing. So far, Fiberglas fabrics are not recommended for upholstery unless they are treated with a plastic coating. Progress is being made in this field, however, and in the meantime such household accessories as mattress ticking, ironing-board covers and closet accessories are granted the blessing of non-combustibility.

In selecting fireproof materials the consumer is fortunate in the diversity of style between asbestos and glass. Fiberglas is essentially lustrous and light-weight, asbestos fabrics have a sturdier look and a mat finish which suits many decorative schemes with beautiful precision.

* * *

Melton Corporation, the first to conquer the difficulties inherent in dyeing asbestos, offers a fabric of interesting crash texture in a range of soft colors or a special order of any color. A small percentage of flame-proof cotton in the core of the warp gives it great tensile strength, and the native acoustical and insulating properties are added attractions. Melton, a leader in metal yarns, likes to weave metal threads into this mat surface to create a subtly rich textile of great distinction. The air is thick with plans at this firm, and included among them for the near future are upholstery fabrics — certainly a crying need. At present their products are primarily suggested for draperies or coverings for walls, ceilings or floors. Audition studios please note.

The United States Rubber Company, which did a splendid job during the war on asbestos fabrics for the navy's fire-fighting suits, began their post-war program in the kitchen with the practical projects of ironing-board covers and other kitchen accessories, for which they and the Textile Mills Company of Chicago have been awarded the Lewis and Conger accolade for "safety in the home." Their plans, however, are at the boiling point for drapery fabrics such as an excellent Asbeston and glass example.

The science and artistry shown in the development of these oldest, yet newest cloths, are among the most fascinating and necessary gifts to our civilization — gifts for which everyone should say an humble thank-you. — *Rachel Smith*

American Fabrics Forum

NEEDED: MORE RESEARCH IN TEXTILES

The Textile Research Institute offers a focal point for wider and more coordinated research.

Are we availing ourselves of the full possibilities of this opportunity?

Let us correct that. Let us put it this way:

The American textile industry needs more *coordinated* research among not only the companies within any one segment of the industry . . . but among the various segments as well.

A number of firms within the chemical industry are firm believers and strong advocates of research; they spend great sums of money in laboratories staffed with the finest technicians and best equipment . . . but many more firms engage in no research.

Many firms in the weaving and finishing and printing and dyeing industries engage in elaborate research . . . striving to find better ways to do their jobs, to develop newer and better products . . . but many firms in these fields prefer to work on established products in established ways.

* * *

Many firms in all branches of the American textile industry do a fine job of research as individuals . . . but is there enough industry support for the already organized and functioning Textile Research Institute? Is there sufficient support for the one focal organization where coordinated thinking and experimentation and planning will redound to the benefit of everybody? That, in our opinion, is where the industry falls down in the matter of research.

It is not enough, we say, for Manufacturer A who produces a new colorfast dye to experiment with Manufacturer B who makes a certain cloth. Or for Manufacturer C who makes a new type of loom to work secretly with Manufacturer D who weaves cloth.

That, we maintain, is not research so much as experimentation. It is coordination at too late an hour. We believe that it should reach back further to the mingling and intermingling of *ideas* in their embryonic state . . . to do the entire industry the most good.

Who can deny that there is room for improvement in the field of weaving and printing machinery? Who is there that believes the industry has reached its apex of either quality or cost-control in any phase? Who would refuse to accept the statement that chemistry can yet unfold miracles undreamed-of even during the war?

How much faster could the entire industry move forward if, instead of working singly . . . as companies or even as branches . . . all within the circle of this field were to join forces in research toward the common goal of improvement?

* * *

Since the makers and the sellers of soft goods . . . the most important users of textiles . . . already foresee that they will have to fight for their position against hard lines, is it not time for the textile industry to gird its loins? Since it is common sense that the future of the industry lies not in producing more fabric, but in producing better fabric . . . is this not the time to think toward that objective?

Research can do an individual company a certain amount of good. Research for all . . . by all . . . in a common pool and for the common good . . . will do much better.

The Textile Research Institute offers Industry a focal point for wider and more coordinated research. Is the American Textile Industry availing itself of the full possibilities of this opportunity?

For those individuals and firms who may be interested in the work being done by the Textile Research Institute it is suggested that they communicate with its head, Colonel Lewis Sanders at the Textile Research Institute's New York office, 10 East 40th St., phone LExington 2-2196.

PIGMENT PRINTING

Recent developments in pigment printing and dyeing are focusing greater attention on this age-old method of coloring textiles.

What is the reason for the rapidly growing interest in pigment colors for printing and dyeing textiles? Certainly not because the use of pigment colors is new.

As early as 400 B.C., the Chinese employed earth pigments and carbon black for producing printed designs on textiles by painting with brushes and printing with wooden blocks. And down through the ages pigments continued to be used for hand block printing. Then, with the invention of the roller printing machine near the close of the XVIII Century, textile printing passed from the handcraft stage to that of large-scale production. Following this came the development of Prussian blue and other synthetic organic pigments, which found acceptance in Europe for printing cotton and other fabrics.

* * *

But, always there was one serious drawback to pigment prints. The designs were not fast to repeated washings. In the attempt to find a binding agent which would anchor the pigments permanently to the fibers, blood albumen, glue, casein, varnish, and many other materials were tried. Finally in 1937, as the result of painstaking research in the laboratories of Interchemical Corporation, an entirely new process for pigment printing was developed. The printing paste employed in this process consisted of a pigmented water-in-oil emulsion containing a combination of synthetic resins, such as a urea formaldehyde resin and a modified alkyd resin as the bonding agents. A special line of pigment colors, known as Aridye pigment colors, was formulated for use with this process. Mill trials proved that the use of these resin-bonded pigment colors permitted the production of printed designs having excellent fastness to laundering, dry cleaning, and other destructive agencies.

Because of their resistance to repeated launderings, plus the fact that they produced fine, sharp lines, pigment colors were quickly adopted for printing cotton shirtings. A little later they began to be utilized for printing cotton dress goods, pajama fabrics, and other materials.

Work was started on the adaptation of the emulsion process of pigment printing to the production of plain shades on work clothes fabrics.

Then came the war, and the efforts of the manufacturers of pigment colors were diverted to the development of special products and processes for dyeing fabrics for military purposes. How successful these efforts were can be judged from the fact that many hundreds of millions of yards of herringbone twill, cotton, duck, mosquito netting, shrimp netting for camouflage, burlap, webbing, tape, and other textiles were pigment dyed during the war years.

Prewar and wartime experience plus unrelenting research have led to many new developments in pigment printing and dyeing.

Today it can safely be said that no other type of coloring material for textiles has the versatility of pigment colors and that no other type possesses so many different advantages from the viewpoint of the designer, the mill man, and the consumer. Like other types of coloring materials, however, pigment colors differ widely in their properties. There are more than a thousand different pigments, but fewer than a hundred of these are suitable for application to textiles. Among that hundred are several pigments which are characterized by superlative fastness to sunlight; some which are exceptionally brilliant in shade; a few which combine both those properties. Selected pigment colors show no susceptibility to gas fading or atmospheric fading even when applied to acetate rayon.

Because they have no affinity for textiles, but are bonded to the fibers mechanically, pigment colors can be applied to cotton, viscose rayon, acetate rayon, Nylon, Aralac, Fiberglas, and virtually all other natural and synthetic fibers and blends.

Resin-bonded pigment colors can be applied by any one of four simple systems. Printing can be carried out by either machine or screen methods. Dyeing consists merely of padding, drying, and curing. In the mill they eliminate dissolving, reducing, oxidizing, developing, ageing, and soaping operations. The colors as printed or dyed are final in shade, thus permitting defects to be detected and corrected immediately.

In the past, one disadvantage of pigment colors was the crocking which frequently occurred when pigments were printed or dyed in dark shades. Recent introduction of a line of low-crock pigment colors has done much toward solving this problem, and it is now possible to print many dark shades, including black — without fear of excessive crocking. Another recent development has been the formulation of a bright red pigment color which displays extraordinary fastness to light, even in pastel shades.

Although textile printers have, for several years, recognized the advantages of pigment colors, converters, garment manufacturers, retailers, and consumers have not been aware of the advantages of this type of color. This is due to the fact that in many instances pigment colors have been employed in conjunction with other types of colors, such as aniline black, vat, or azoic dyes, in producing multi-color designs. With a broader range of shades now available and with the advent of the new low-crock pigment colors mentioned above, the trend now is toward the use of pigment colors alone for printing a wide variety of cotton, rayon, and other fabrics.

Three important advantages of pigment colors for printing not cited previously are that they provide complete fidelity of reproduction even of photographic engravings, permit controled penetration, and minimize breaking and cracking of lightweight fabrics.

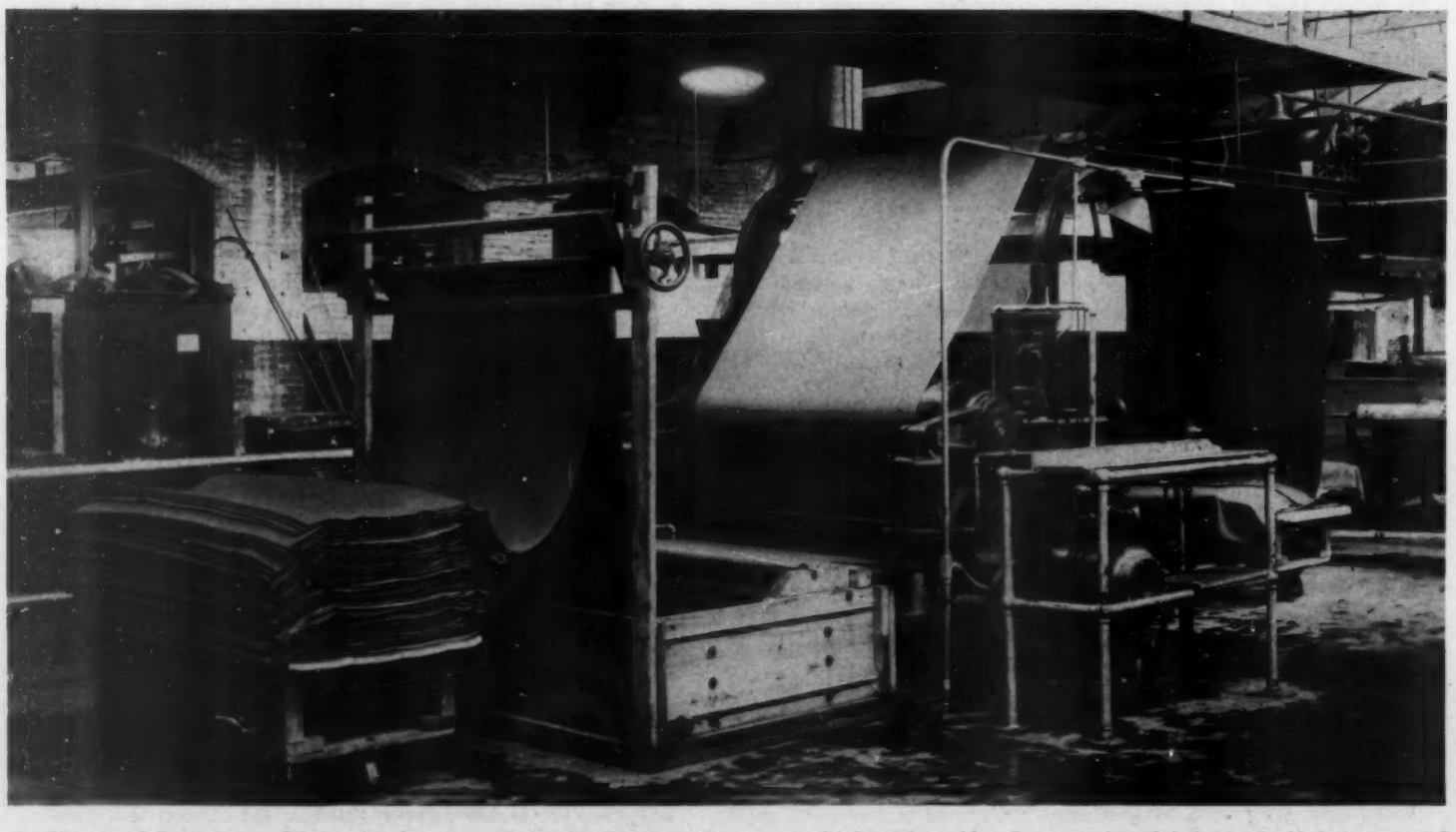
Cotton fabrics, other than shirtings and dress goods, which are being printed with pigment colors include those used for housecoats, beachcoats, men's shorts, swimming trunks, children's playclothes, draperies, curtains, and handkerchiefs. The new low-crock pigment colors are being employed extensively for printing viscose rayon, Bemberg rayon, and acetate rayon dress goods, blouse fabrics, underwear fabrics, scarves, and other materials. Pigment colors are proving to be "naturals" for printing almost any type of fabric which contains two or more fibers.

Converters and stylists are awakening to the possibilities of pigment colors for producing brilliant shades, unusual color combinations and unique effects which would be difficult or impossible to obtain in any other way. A number of pigment colors have been found useful for printing discharge styles. Recently some novel effects have been obtained by overprinting with pigment colors on dyed grounds. Specially formulated pigment colors are applied by a solvent-dispersion system for printing on vinyl film and vinyl-coated fabrics.

Whereas pigment printing has come of age, pigment dyeing of civilian fabrics is still in its infancy. One reason is that pigment dyeing by the water-in-oil emulsion process necessitates the use of special equipment which is not available in most finishing plants. Such equipment is not needed, however, for pigment dyeing by either the oil-in-water emulsion system or the aqueous dispersion system, and the major emphasis now is on the development of improved products and processes for use with those systems. Although many millions of yards of fabrics have been pigment dyed by each of those two systems, the types of material which can be dyed and the range and depth of shades which can be produced satisfactorily are still limited. Because they can provide uniformity of shade combined with excellent fastness to light, laundering, drycleaning, perspiration, gas fading, pigment colors appear destined to find an important place in dyeing of many types of cotton, rayon, spun rayon, and other fabrics. — *Winn W. Chase*

Multi-color print on acetate rayon sharkskin produced with Aridye Pigment Colors by International Dye & Print Works, Division of Allied Textile Printers.

After initial application, resin is set inside microscopic hollows of individual fibers through the application of heat. Curing time in the drying oven depends on the fabric itself, the concentration of resin and other factors. Acid dyed woolens, for illustration, require from 10 to 15 minutes at 280 degrees F.



Application of the resin to a fabric — in this case, a fine worsted — is made on a standard textile padder. From stock in left foreground, cloth is passed through a water solution of the melamine-formaldehyde resin (in wooden box) and then excess resin is squeezed off by large rolls of padder.

TOMORROW'S TEXTILES

From the headline writer's standpoint, it would be most agreeable to proclaim at the beginning of this article that tomorrow's textiles will be derived from such relatively unorthodox materials as steel, aluminum, magnesium, seaweed, glass, or, let us say, common clay. Unfortunately, however, this approach would be based more on fancy than on fact. Evidence at hand strongly suggests that fabrics of future will be dominantly cotton, wool, rayon and nylon plus chemical and plastic modifications of these fibers.

It is true that glass yarns have been created which are stronger than anything else yet encountered, and it is equally true that corn meal gives a fiber of outstanding wear resistance. Considerable promise is shown by Aralac, the protein derivative, and there is no valid reason to assume that America's technological well is drying to the extreme where we can discount the possibility of entirely new and wholly superior synthetic fibers. But within the foreseeable future, my forecast is that the first two natural and two synthetic fibers mentioned will remain the leaders. It is likely that the relative importance of cotton and wool will change as new blends and constructions and modifications of these fibers give fabrics of far greater utility and service.

Changes in Quarter-Century

Consider what has happened in the last twenty-five years. It seems only yesterday that the textile industry appeared to be as secure as an industry could be — one foundationed on cotton, linen, wool and silk. All of these were not a thousand years old, but as old as the history of man. They were thousands upon thousands of years old. They were established and outstanding — cotton for durability, washability, serviceability; wool for warmth and comfort; silk for style and charm; and linen for coolness.

Time has failed to alter the fundamental properties on which these natural fibers established themselves. Today, however, silk is seeking to regain its toehold, after being almost entirely off the market, while linen is a decreasing specialty. Wool is no longer the second most important fabric, having moved, perhaps temporarily, to third place. Cotton is severely challenged, its most important market outlet — tirecord — lost during the war. What has happened? It is simply that rayon and nylon have made broad-scale entries into the textile field, achieving wide acceptance on the basis of merit. Most importantly, where others have failed to advance, rayon and nylon have been constantly improved. They are here to stay, or at least to remain until science contrives new synthetic fibers of superior properties and lower costs.

So it is seen that no revolutionary forecasts can be offered with respect to the *types* of fibers that are to be employed in tomorrow's textiles. The revolution, on the other hand, seems almost certain to be hinged on the modification of existing fibers or, if you please, on the ability of the technologist to give them new and superior and more desirable properties without impairment to the good characteristics which they now possess. And here we speak of something that is not in the realm of the crystal gazer, but rather a reflection of accomplished and proven fact.

Throughout laboratories of this and other countries scientists have been making tremendous strides in the field of textile chemistry. They are far advanced along pathways leading to fabrics specifically treated to resist wear, fire, water, mildew, shrinkage, moths, staining or soiling . . . or a combination of these factors.

Let us briefly review one relatively new phase of textile chemistry — that which has to do with the impregnation of artificial or natural fibers with a melamine resin to produce greater stability, washability, and muss and crush resistance.

Dr. D. H. Powers, Director of Monsanto Chemical Company's Department of Textile Chemistry, discusses timely phase of textile chemistry — the impregnation of fibers with property-improving resins.

Millions of yards of rayons today are being plastic-modified with this resin, which imparts ability to hold shape without shrinking or stretching after repeated washings. Applied on existing mill equipment, the process consists of forming plastics within the fiber itself. No plastic is left on the surface, so the resulting fabrics look exactly like untreated fabrics, but they possess now the muss resistance of a fine wool.

Yet the story does not end with rayon. Repeated tests have shown that while rayons take up the resin most quickly, woolens and worsteds are the next easiest to penetrate, real silk may be treated, and that cotton fibers are also susceptible to a very great improvement. It logically follows that wool is to be the next beneficiary. A wide range of experimental fabrics built from worsted yarns stabilized with this melamine resin has already been introduced.

While the melamine resin treatment of wool was originally developed for the shrinkage control of flannels and blankets, studies during the past year have shown that it imparts far greater stability and muss resistance to worsteds and tropicals and gives lightweight suitings the tailorability and drape of a much heavier worsted. Light worsteds which did not tailor well are now given an excellent stability as well as a greater ability to hold crease and shape in humid and damp weather.

The resin is applied to the woven fabric just before finishing and is capable of building up the weight of the fabric from 5 to 25 per cent; the surface appearance and the feel are unchanged, but the yarns are swollen and better cover is achieved. Apart from greater springiness and resilience or muss resistance, the treated fabric shrinks far less in subsequent sponging and pressing. Enough shrinkage is left to permit shaping and molding in tailoring, but excessive sponging loss is entirely eliminated.

Other Advantages

Fabrics thus treated cannot be recognized by feel or appearance, or even under the microscope; the resin is fixed (condensed) in the fiber and becomes a permanent part of it. It cannot be removed by any known process. A soft woven structure is given a backbone and stability while maintaining the softness and feel which are possible by a blend of the finer imported or domestic yarns. An increase of 10 to 20 per cent weight with the resin impregnation frequently makes possible the use of 10 to 20 per cent less yarn.

In the past few years, we have learned much about the function of fabrics. We know now that fabrics need not be made of wool to be warm, or of linen to be cool. We know that a fabric gives warmth according to its thickness, and coolness according to its thinness. We also know that a fabric feels warm according to its roughness and feels cool according to its smoothness. And here, again, melamine resin enters the picture to provide smoother, cooler worsteds and woolens.

Worthy of special mention is the fact that the melamine resin we have discussed is but one of many applications of textile chemistry showing great promise toward improving the function of fabrics. Within the next few years we are likely to see and benefit by many others — fabrics which breathe but resist stain and repel water; draperies made resistant to flames without change of drape or appearance; processes to impart greater strength to cotton fibers; and so on in an almost endless progression.

We are going to find, I believe, that emphasis will be placed on the performance of certain *functions*, regardless of fiber composition. Those fibers which best contribute the required properties — whether natural fibers or synthetic, or whether a blend of each — will gain the largest portion of our markets.

letters to the editor

TO THE EDITORS:

"The Textile Forum," non-profit student publication of the North Carolina State Textile School would like to reprint your article, American Fabrics Condensed Dictionary of Textile Terms. Please reply by mail to Box 5626 State College Station.

W. T. Greer, Raleigh, N. C.

TO THE EDITORS:

In the American Fabrics, Issue No. IV, there is an article on page 89 called "What the Piece Goods Buyer Can Learn from the Apparel Business." We feel that this is so well written and contains so much basic information that it might easily be used for both a counter display chart and also a little booklet to be given to sales girls to help them sell fabrics.

I would appreciate knowing whether this is available for use.

Paul Geden, Advt. Mgr.,
Cohama Fabrics.

TO THE EDITORS:

I am writing a book on the *Emotional Content of Color* and I would like to purchase four (4) copies of your "Color Aptitude Test." I would like to use the above as one of the tests to be employed in the writing of my book.

Would you be so kind as to grant permission to me for the use of your test as illustrative material in my book? Any additional information on responses to your test, pre-publication testing, etc., would be greatly appreciated.

Mrs. T. R. Newman, Bayonne, N. J.

TO THE EDITORS:

I would like to know if there would be any objection to us using some of the material from time to time that you publish in this magazine. We contact over 10,000 rural women in Colorado and these women are interested in knowing about new fabrics and finishes. It would help us considerably to use some of the material that you put out in your magazine.

Helen Prout, State Home Agent
Agriculture and Home Economics
State of Colorado

* * *

Editor's Note: **Permission to reprint copyrighted material from issues of *American Fabrics* is freely given to accredited organizations and individuals. The publishers merely ask that all such requests be made in writing and that we receive complete records of reprints that are made.**

TO THE EDITORS:

I was very much interested in the Eye-Q test in American Fabrics. I am particularly impressed by the printing process and would like to have more information as to the method. It is possible that we might like to use it in some of our own direct mail advertising. I came out with a score of 92.

Stanley Marcus,
Neiman-Marcus, Dallas, Texas.

* * *

Editors' Note: **The printing process referred to was silk screen paint on paper and was done for *American Fabrics* by Mr. George Tillett . . . Mr. Stanley Marcus' score of 92 was excellent, indicating unquestionably his ability to direct fashion activities of his great store.**

* * *

TO THE EDITORS:

We feel that this is one publication that everyone interested in selling, especially those who sell any products made of fabrics, can study — in fact should study. Each issue is a textbook to itself.

Paul W. Lampertine, Editorial Director, Retail Stores Services, The National Research Bureau, Inc., Chicago, Ill..

* * *

TO THE EDITORS:

Having received four wonderful issues of American Fabrics and carefully examing each, I wonder if the following might not be of interest to you and your readers.

To date, you have done a splendid job with the traditional designs and the many sources for inspiration that the designers have at their reach. Your many excellent reproductions of "Museum Pieces" are of great interest to all of us.

But, what of contemporary design, the need for it and the reason for it? Do you not think that since so many designers are beginning to turn their creative efforts towards designs that are related with our 20th Century, that an article with illustrations would not prove interesting to your readers? Most people question contemporary fabrics, and wonder if there is any justification for them. An article explaining what contemporary design is, what its function is, and tracing fabric design from its beginning through its natural evolution into contemporary, would give your readers a better basis for accepting or rejecting these designs. Your Christmas Issue is a masterpiece.

Angelo Testa, Chicago, Ill.

* * *

CONTEMPORARY VERSUS TRADITIONAL: The value of each school will be presented in a forthcoming article in Number Six of AMERICAN FABRICS. AF has emphasized "Museum" inspirations, mainly that contemporary designers and creators do not overlook the rich heritage which the past has bequeathed to us.

* * *

TO THE EDITORS:

I have tried through the Saturday Review of Literature and the New York Times book sections to get a copy of the first issue in order that I might have a complete set for teaching references. I had no luck.

Is there any possibility of your procuring a single copy of the first issue? I should be happy to pay for it separately. I would accept even a used copy, as I really need the material. Hannah L. Clayton
Washington 12, D.C.

* * *

TO THE EDITORS:

Please advise me if back issues are available. Alice N. Estes
Long Beach 14, Calif.

* * *

TO THE EDITORS:

Some time ago, a gift copy of AMERICAN FABRICS was sent to the University of Hawaii Library. After looking it over, we have decided to order a complete set for this department. We would need the first and third issues of AMERICAN FABRICS to have a complete file.

B. Ikeda, Home Economics Dept.
University of Hawaii, Honolulu

* * *

Note on First Edition of American Fabrics: **The above letters, typical of many universities, firms and individuals who would like to maintain complete files of *American Fabrics*, emphasizes the need for these Number 1 issues. If AF readers have extra copies of these Number 1 issues, it would be greatly appreciated if they would ship them to us for redistribution. The publishers will, of course, pay the full original purchase price for these copies.**

* * *

TO THE EDITORS:

Thank you cordially for the beautiful copy of American Fabrics which you sent me. It is a pleasure to receive so fine a publication. G. H. Edgell, Director,
Museum of Fine Arts, Boston.

Editors' Note: **The publishers have notified a number of regular subscribers (via mail) that gift sets of the first four volumes of A.F. were available for the recent Christmas season at $15 per set. The response has left only a limited number of these sets available and it has been suggested that wherever possible the technical schools and universities and permanent libraries of the larger companies should have first call on the remaining sets. Early action is urged in the reservation of these soon-out-of print first year's volumes.**

* * *

TO THE EDITORS:

We received the Number IV copy of American Fabrics and want to thank you very much for it. The school library gets a copy for its files and it is eagerly awaited by the whole school, profs as well as students. To give you an idea of the way American Fabrics is received in school, the librarian is having your magazine leather bound to keep as a permanent part of the textile library.

One of your last two editions gave another student and myself a basic idea for a Jacquard pattern. We are now cutting cards for it and hope to have it on the loom in a few weeks.

Martin Liberman, Philadelphia
Textile Institute, Phila., Pa.

* * *

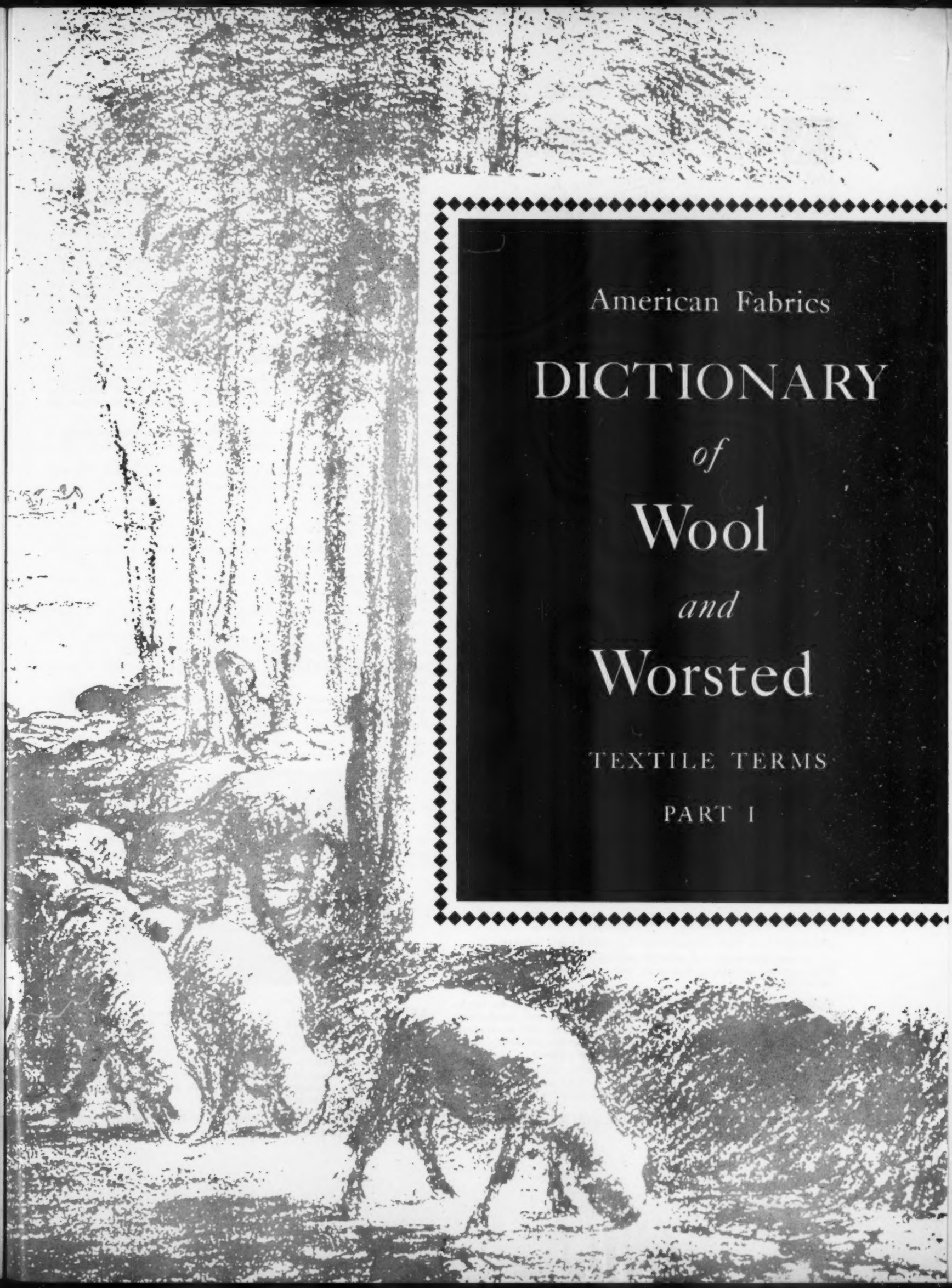
TO THE EDITORS:

The extra 1947 subscription is for a young Japanese friend of mine, a textile economics student, who was enthralled by an issue of AMERICAN FABRICS which I happened to have with me, and who expressed a wistful desire to "someday . . . subscribe to such a wonderful publication."

Inasmuch as there is no International Yen rate of exchange, the Japanese are not able to make any sort of purchases abroad; and I decided to buy a 1947 subscription for this student as a Christmas present. It is anticipated that a Yen exchange rate will be established some time next year and he will be able to enter his own subscription.

Helen Panaretos, ESS, GHQ,
SCAP, Textile Division,
APO 500, c/o PM. San Francisco

CORRECTION: In the advertisement for Somersville Mfg. Company, on page seven of this issue, the address of O'Donnell & Ellis, women's wear selling agent, is incorrect. It should be 450 Seventh Ave., New York City.



American Fabrics

DICTIONARY

of

Wool

and

Worsted

TEXTILE TERMS

PART I

ABA: A wool, hair fiber or combination-stock material used by the peasants in southern Europe and Asia. The fabric is coarse, thick, and has considerable felting applied in the finishing.

ABAT-CHAUVEE: French for low-quality wool.

ABB:1. Low-grade wool taken from the rump and the tail of merino and other sheep. It is suitable for only low-grade yarns and is used chiefly for warp.

2. Another name for a filling pick.

ABBA MANTLE CLOTH: A plain or striped Arab costume cloth, made of silk or camel's hair and used as a covering for the other clothing worn by the individual.

ABBOTSFORD: A light twilled-woolen cloth with a subdued check pattern.

ABDIG, ABUDIG: Medium-fine wool from Morocco.

ABERDEEN: Sometimes used in Great Britain, it is a system of heavy yarn counts for wool, jute, etc. The unit is based on the weight in pounds of one spindle of 14,400 yards; a 4s means that one spindle weighs four pounds.

ABSORPTION OF MOISTURE: Wool is able to absorb a large amount of moisture without feeling damp or wet to the skin. Thus, body perspiration from the inside and moisture from the air on the outside are taken up by the yarns and evaporated.

ADELAIDE WOOL: Obtained in and around this city in Australia, the wool is a high merino quality which is slightly lower in quality when compared with Port Philip and Sydney wools raised in Australia. It can spin to 60s worsted counts and finds use in high quality worsteds made from very fine, choice fibers.

ADMIRALTY CLOTH: 1. Slang expression for melton cloth used for officers' uniforms and coats in the British navy.

2. General term for heavy-weight pea jackets and officers' coats used in the American naval service.

ADVANCE SAMPLES: Short lengths or blanket ranges which usually run from six to ten yards in length. They are made up for the coming season, and very often from these samples designs are chosen by the trade. Small swatches of cloth are pasted on cards and distributed to prospective buyers who make their selections for purchase.

AFGHAN: A knitted or crocheted wool blanket or robe made with a series of stripes, zig-zag effects, or squares varying in size and vivid colorings; gives great warmth.

AFRICAN WOOLS: Refers chiefly to wools from the Union of South Africa — Orange River Colony, Natal, Transvaal, Rhodesia. These very soft, fine, white Merino wools are much sought for by woolen and worsted mills all over the world. Native breeds of sheep furnish much of the annual yield of African wools and it should be borne in mind that this stock is apart from the merino type wool. Low yield and inferior quality, along with careless handling, mark the characteristic of wool from the native sheep.

AIT MOHAD-BERBER: Moroccan sheep, which give a coarse, straight-fibered wool from a fleece of about four-pound weight.

ALASKA: Dress and coat fabric of Great Britain, usually made of union fabric or mixture material. Cotton and wool are used frequently in this plain or twill woven fabric, which is given a napped finish.

ALASKA YARN: Mixture yarn of about two-thirds cotton and one-third combed wool stocks; popular in knitting circles.

ALBARZINE: Medium quality from Aragon, Spain.

ALBATROSS: 1. Plain woven cotton cloth which has a soft nap.

2. A fine, lightweight, soft material made of good quality worsted yarn. Plain or rather open fancy weaves are used to enhance the crepe feel and surface effect.

ALBERT CLOTH: Named in honor of Prince Albert of England, the fabric is of the formal, dressy type and is made on the principle of double-cloth construction. Added weight, texture, and warmth result from the manner in which the cloth is made. Used for Prince Albert coats and other formal attire. A velvet collar adds to the nattiness of the garment.

ALBESINE: A popular Spanish wool.

ALCANTARA: A low-grade Spanish wool.

ALEXANDER TWILL: Alpaca lining fabric made with cotton warp and alpaca filling; small, fancy twill used.

ALGERIENNE: Used in the tent and awning trade in North Africa, this woolen material is featured by brilliant stripes in filling direction of goods.

ALLEY: The space between the Breaker Card and the Finisher Card in which the so-called alley-tender works.

ALLOA: A Scotch method for numbering woolen yarns based on a standard of the number of "spyndles" of 11,520 yards each which weigh 24 pounds.

ALL-WOOL: A material of any description whose yarns are all wool, understood to be the wool of sheep. The term has to be weighed carefully, since it includes, in addition to the pure, new fibers, other stocks, such as shoddy, mungo, extract wool, reused wool, remanufactured wool, etc. All-wool is often misunderstood in the trade when purchasing fabrics or garments and the consumer may be the loser. Cotton, for example, may cost more per pound than some of these aforementioned fibers that go into an all-wool fabric. Very often an all-wool fabric may not mean too much where quality is considered. Distributive and consumer education can do much to alleviate these possible misunderstandings which, at times, may have the tendency to more or less confuse the purchaser.

ALPACA: Raised in the Andes Mountains, the fleeces are usually obtained after a two-year growth. The fiber diameter is about 1/800 inches. The fiber is lustrous, soft to touch, strong, rather wavy; the fleece will weigh about ten pounds.

Fine alpaca is from 4½ inches to 8 inches in length; medium alpaca is 5½ inches to 9 inches long; coarse alpaca is from 7 inches to 11 inches in staple length.

In color, alpaca fibers range from white to brown or black. The two types of fibers obtained from the 180-pound animal are:

1. Soft wool-like hair.
2. Stiff beard hair.

Alpaca is coarser than either camel or vicuna.

ALPACA CREPE: Made of two-ply yarn, the fabric simulates woolen cloth of that name.

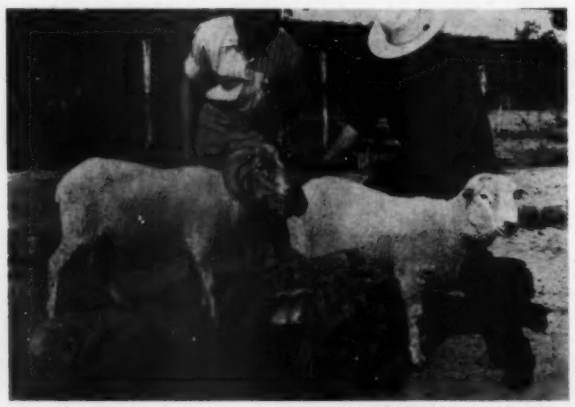
ALPACA LINING: Made chiefly in England, this lining fabric has cotton warp and alpaca filling.

AMAZON: A woolen-worsted dressgoods in which the fabric finish completely covers the weave construction. Made on a five-end satin, worsted warp and wool filling, the fabric presents a solid worsted effect on the face and the woolen yarn used gives the soft, full hand to the goods.

AMAZONES: General term for woolen fabrics in many South American markets.

AMENS: Formerly used for church vestments, they are worsted fabrics with a cord-effect warp stripe; small fancy patterns are also featured in the material. Used for dressgoods.

AMERICANS: Common term for any of the cloths produced in any of the mills of the American Woolen Company.



U.S.D.A. Photo by Knell

AMERICAN WOOL CLIP: The annual clip of wool in this country is about 300 million pounds, about one-third that of Australian wool. America is surpassed only by Australia and Argentina in annual wool clippage. This country has about 7 per cent of the world sheep population of 720 million sheep. Wool is raised in every state in the Union and Texas leads with about 25 per cent of the annual clip and the number of sheep. Wyoming, Montana and California, in that order, follow Texas, with percentages of about 8, 8 and 6.

AMIENS: Originated in city of that name in France. Material is a hard twisted worsted cloth made of a twill weave in solid colors or patterns.

ANACOSTA: High texture and quality worsted dressgoods, made in Great Britain. Filling texture is higher than warp. Piece dyed.

ANACOTE: Central European worsted serge with smooth sheen and finish. Small twill weave used in making the material. Cloth has demand among the religious orders, and also finds a market in regular trade.

ANATOLIAN: A small, all-wool rug made in Asia Minor and used for pillows; the soft, long pile is tied in Ghiordes knot. There is much color and design in these rugs, which are finished with an all-around selvage and a fringe or binding at the ends. Large size Anatolians have a long, compact pile.

The term includes the long, medium grade of wool obtained from Caraman sheep, native to the home land of the Turks. These flat-tailed sheep supply much of the carpet wool for the Turkish rug industry.

ANCON: Also known as Otter sheep, this former breed used in this country was easily recognized since it had a very long body and short, crooked legs.

ANDALUSIAN WOOL: 1. Medium fine Spanish wool.

2. A very fine, four-ply worsted yarn much used for knitting purposes in the British Isles.

ANDALUSIAN YARN: A four-ply, very fine worsted knitting yarn much used in Great Britain. Ideal in outer garments for winter wear.

ANDALUSIANS: Made from Spanish merino wool and comparable grades, these fine worsted dressgoods made in England come in a variety of twill constructions and fabric weights.

ANGLESEY WOOL: A type of wool obtained from a Welsh breed of sheep.

ANGOLA CLOTH: Cloth made of a twill weave. The woven material is usually dyed some shade of red. There is also a yarn of this name, a cotton and wool mix yarn. A third meaning of this term is that it applies to an overcoating material made of a low texture twill weave; the cloth is heavily napped, rather thick and substantial.

ANGOLA MENDINGS: English yarn of cotton and wool mixture, it is used for darning stockings.

ANGOLA YARN: A yarn made of about 80 per cent wool and 20 per cent cotton; low quality wool is used in this yarn, spun on the woolen system.

ANGORA: 1. Goat hair; the white fleece of long, fine fibers and when manufactured is called mohair. Because of its smoothness and softness, it must be combined with other fibers in weaving.

2. Rabbit hair; Angora rabbits possess an exceptionally fine hair that is very light in weight and furnishes much warmth to the wearer of garments thus made. This fiber is often blended and mixed with wool to lower the price of the finished article and to obtain fancy or novelty effects in weaving. Must be designated as Angora rabbit hair.

3. A highly finished, plain woven fabric made of cotton warp and mohair filling.

4. A twill woven overcoating with a shaggy, fuzzy surface effect.

5. A soft yarn used for knitting purposes. Genuine Angora knitting yarn is scarce in this country and the center of the industry is France. The true fiber sells for about 15 dollars a pound.

6. The well-known, highly cherished Angora shawl. This luxury, heirloom article gives excellent wear for many years.

ANGORA GOAT: A species of goat originally bred in Anatolia, the homeland of the Turks, and later introduced in South Africa, South America, and Texas. The genuine long silky mohair fiber is obtained from the animal.

ANGORA RABBIT: Raised chiefly in Great Britain and the Low Countries on the Continent and noted for its fine fur. Clipped annually, the breed will give 10 to 16 ounces of hair fiber which ranges from 3 to 5 inches in length. Very soft, fluffy, appealing in feel, the hair is usually pure white.

ANGORA RABBIT HAIR: Soft, silken-like, very fine hair from Angora rabbits. Often blended in small but varying amounts with wool or rayon in the manufacture of knitted materials, chiefly sweaters.

ANGORA WOOL: Sometimes applied to mohair.

ANIMAL FIBERS: General term for fibers taken from animal life — worsted, wool, silk, etc. Basically nitrogenous in substance, the fibers give off the odor of burning feathers or singed hair when a lighted match is applied. Animal fibers are more resistant to acid than to alkali.

ANTHRAX: Also known as "wool-sorter's disease," it is a malignant infectious disease often contracted from handling animal fibers, especially wool. Both animal and man can pick up this disease. While not always fatal, it is painful and when confined to the skin alone a cure can often be effected.

APPAREL WOOL: Broad term used chiefly for tariff purposes, which embraces all wools except carpet and pulled wools. Apparel wool finds much use in blankets, felt, upholstery and similar materials.

ARAB WOOL: Wool from sheep raised in the Mesopotamian plains.

ARALAC: Casein is the base for this fiber, which resembles wool. It is precipitated from skim milk which is dissolved in alkaline solution. Ageing, spinning, cutting continuous filaments, washing, treating and drying follow. Its composition is closely akin to that of true wool.

Aralac comes chiefly in three and five-denier sizes and in any length desired. It is used at times as a substitute for wool and other major fibers. It may be used alone, as well. Uses are for coating and suiting materials, uniform fabrics, dressgoods, hosiery, underwear, sweaters, and in the millinery trade. (See Casein.)

AREQUIPA FLEECE: Applied to alpaca fleece and named for this export city for the fiber, in Peru.

ARGALI: 1. The so-called "A" sheep of Siberia yield a long, dark gray fiber that is ideal for carpet yarn.

2. Bearded Argali are also known as Barbary sheep.

3. A wild sheep from the Pacific Coast known as Big Horn or Rocky Mountain sheep.

ARGENTINE MERINO: Rambouillet and Southdown sheep laid the foundation for this breed of Merino sheep, very popular in South America. While high in quality, it is not quite so fine as Australian Merino, a very popular wool in this country.

ARGENTINE WOOL: The chief wool nation in South America. Merino, cross-bred and carpet wools are raised in Argentina. Lower grades are often infested with burrs and other vegetable matter to the detriment of the fleece. Chief shipping center is Buenos Aires. Argentine wool is much used in America. New Orleans is the port of entry.

ARISTO CARPET: This term means the highest, the finest and the best, and when applied to carpeting of this name refers to the old-time, high quality Royal Axminster. Compared with the latter, Aristo now differs from it only in the pitch or number of points to the square inch. It is much like moquette carpeting used in this country, which is made of wool and has a thick, velvet-like nap or pile. Years ago, Aristo was one of the best carpets on the market, but in late years its popularity has waned because other types of carpet have become more popular and the former quality of Aristo is missing.

ARKWRIGHT, SIR RICHARD: The Father of the Factory System in industry. He revolutionized the art of spinning in 1768, by his invention of the spinning frame that would draw the stock into a finished, spun yarn. It was the successful application of automatic spinning. He did not receive his title for his work in textile machinery inventions, as is generally believed.

His spinning machine was originally called the lantern frame, because of the fact that the sliver can used had an opening in the side, closed by a door, through which the sliver was removed, and resembled a lantern in looks. Drawing was accomplished by passing the sliver or strands of stock in rope form between two pairs of rollers that nip, and momentarily hold the strands or fibers. The second pair of rollers, revolving more rapidly than the first pair, did the drawing of the fibers. The first pair was called the feeding-in set of rollers; the second pair, the delivery rollers.

The distance between the two pairs of rollers was only a little more than the length of the fibers, so that the drawing caused the fibers to slide upon one another, without actually stretching or breaking them. His frame was the first type of upright spinning machinery.

ARMY BLUE: 1. Blue uniform fabric formerly used by the U. S. Army. Originated at the time of the War between the States.

2. Blue fabric used in making U. S. Army fabric, such as Marine blue for marine dress uniforms.

ARMY CLOTH: Broad term for the fabrics used in uniforms of soldiers in the American army; cavalry twill, serge, elastique, overcoating, etc.

ARRAS: 1. Name of city in France which for centuries has been noted for its tapestry work. Arras is so well established today that people no longer use the capital "A" when speaking of an arras or tapestry wall covering; the terms are considered synonomous.

2. Arras is the name given to certain French worsteds made in this locality.

3. This center produces a white, French bobbin lace which resembles Lille lace. Arras lace is compact, strong and has a straight edge with the mignonette used as the basic pattern.

ARSCOT: A fine Belgian serge made with high-grade woolen yarn; has woven, compact texture.

ART SERGE: A 2-up and 2-down woven worsted which is fine in texture, piece dyed in many suitable colors, and used for draperies, table covers and general decorative purposes.

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Merino fleece
Merino broken
Merino pieces
Merino bellies
Merino locks
Merino lambs
Comeback or ½-blood fleece
Comeback or ½-blood lambs
Crossbred fleece
Crossbred lambs

Scoured Wool—
Merino fleeces
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AVILA: Spanish wool from the province of this name.

AVOUET: Persian rug wool from 3-year-old sheep.

AWASAI: An ideal carpet wool from Mesopotamia and very popular among carpet manufacturers in America.

AWASSI KARADI: Raised in Persia (Iran), this popular wool is ideal for use in the manufacture of carpets and rugs. Great amounts of the wool are shipped to the United States. The staple is short, strong, resilient, and its great use is filler stock in carpeting.

AXMINSTER: A cut pile woolen fabric, 7 tufts to the weft inch inserted throughout guiding tubes into cotton chain warps and bound with a heavy Kraftcord of jute weft filling and binding yarn carried by a needle thrust to weave a 3-shot construction. Unlimited in use of colors in design, the Axminster weave is identified as rollable warpwise but not weftwise.

"B. A. WOOL": See Argentine wool.

BABY COMBING WOOL: Fine, choice wool fiber which ranges from 1½ inches to 2½ inches in staple length. The French method of combing is used to make high grade worsted yarn from the stock.

BABY FLANNEL: A plain weave, bleached, lightweight, soft woolen cloth used in children's underwear and garments. The nap on the cloth is variable as to length, thickness and wear, dependent on the texture and the quality of the stock used. The predominant colors are pink and blue.

BACK: The underside of cloth as it is being woven in the loom; in silk weaving, however, the fabric is usually woven face-down.

BACK FILLING: An extra filling woven into a cloth to add weight strength, warmth, or to define a pattern such as pique, Marseilles quilting, Frenchback, overcoating, etc.

BACKED CLOTH: Single texture material with addition of an extra warp or filling that is added for weight and warmth. The extra warp or filling may be of wool, worsted or cotton. This type of construction is found in Frenchbacks, vestings, worsteds, dressgoods, suitings and skirtings. Satin weave constructions, as well as twill weaves, may be used in the designing of the cloth.

BACKED FABRICS: Cloths made with three sets of threads — one warp and two fillings, or two warps and one filling. The former is known as a filling backed fabric; the latter, a warp backed fabric. The extra warp or filling adds weight to the cloth, gives greater warmth and helps to cover up the spaces between the interlacings of the warp and filling threads. Cloths of this type have a wide range of design and variety. Backed cloths are used for coating, suitings, vestings, trouserings, novelties, fancies,

blankets, decorative cloths and Frenchbacks. Much of the material is relatively low in price.

BACKING: The extra warp or filling employed in forming the back of faced cloth.

BACKING-OFF: Spinning term which means the uncoiling of slack yarn from the spindle on the mule; occurs between the spinning and winding-on periods. The yarn which extends from the spindle by the reversal of the spindle is unwound and carried by the winding faller into correct position for winding on the cop.

BACKWASHING: The removal of the oil which has been put into worsted stock in the blending, oiling and mixing operations when the mix was made up. The fibers are washed in an emulsion and then treated with a weak acetic acid bath and warm water to complete the scouring. This is done as the oil put in during the auxiliary processes is no longer needed for the smooth running of the stock through the machines which follow backwashing. Final rinsing completes the scouring of the fibers, and they are then dried.

BACTRIAN CAMEL: See Camel.

BACTRIAN WOOL: Long, irregular hairy fibers obtained from camels. Mixed with cotton and wool, it is made into lining fabric for outerwear garments.

BAD START-UP, SET-MARK: On older types of looms they were caused when filling became exhausted, thereby causing the weaver "to find the pick" before weaving could continue. Modern looms with battery and feeler motions are immune to these blemishes; however, in weaving filament yarn, and sometimes spun rayon, set-marks are made by the sudden and rather violent stoppage of the loom because of a severe braking action. The shock of violent stoppage will often stretch rayon, and when once in that condition will remain so. This will rarely happen when weaving cotton, woolen or worsted fabrics.

Bad start-up may be caused by faulty beginning when the loom is put in motion. Other causes include incorrect drawing-in or reeding-in, ends out, rolling selvage, too much moisture in the weave shed, faulty picker sticks, etc.

BAG: Small lot or sack of wool with a tare of about three pounds.

BAGDAD WOOL: Dark carpet wool from Mesopotamia; much used in this country.

BAGGY FABRIC: A loose place in a cloth which gives the appearance of a bag or pocket. Some double plain cloths show this effect because of the manner of construction; where the face and back of the cloth do not interchange there is the tendency for this pocket to appear.

BAKU: An oriental hand-knotted woolen carpet.

BALE: 1. A compressed pack of wool of a convenient form for transit, varying in weight from 150 pounds to 1,000 pounds, in the countries of production. Australian bales weigh about 300 pounds. Argentine bales, 1,000 pounds. Burlap is used as the covering.

2. Cotton bales vary much in size and weight. The American bale measures 54 x 27 x 27 inches, and weighs about 500 pounds. Other bale weights are: Sea Island, 380 pounds; Egyptian, 750 pounds; Indian, 400 pounds.

3. The average European silk bale weighs 100 kilos or 220 American pounds. Japanese and Shanghai bales average 133.33 pounds; Canton, 106.67 pounds.

BALLING, BALL WARPING: Either term signifies the winding of slivers of worsted top into convenient balls to facilitate their use in ensuing machine or for top dyeing.

BALLING HEAD: A delivery device used on worsted cards, gill boxes, etc., in worsted yarn manufacture. The web of fibers as they come from the doffer roller of the worsted card are converged and condensed into a sliver formation for passage through a trumpet device to be wound onto a headless wooden spool about 18 inches long. The balling head attachment may be at the center or side of the delivery end of the machine. A balling head resembles a cheese in appearance.

BALMACAAN: Named after a Scottish moor, this loose-fitting topcoat is made of homespun or tweed, and is characterized by the natty raglan sleeve, which permits free arm and shoulder action.

BALMORAL: A strong, heavy, British woolen fabric made on a twill weave; stripes of red, blue, black and gray feature the material.

BANBURY PLUSH: Made of cotton warp, woolen filling and wool pile effect, this plush is popular in England.

BANNOCKBURN: Name is derived from village of that name which is about twenty-five miles from Glasgow, Scotland. Obviously, this is a tweed center. Cloth should be made with alternating single and two-ply yarn, the latter being of contrasting colors. Used for suitings and top-coatings, and always in demand. One of the best tweeds on the market and is a typical British fabric. The battle of Bannockburn was fought in 1314.

BARATHEA: Fine textured material of broken filling character. Made of silk or rayon warp and woolen or worsted filling. Other combinations may be used. High quality stock is used in making this cloth. Used as mourning materials and in cravat cloth. Cloth is black as a general thing.

BARB: 1. The starched fabric which covers the throat and extends from the chin to the upper chest, a part of the headdress worn by nuns of religious communities. This linen, cotton or combination material was formerly worn by mourners in many sections of the world.

2. The small protruding scales found on animal fibers; used in the hat industry, these barbs make it possible for the fur fibers to be felted.

BAREFACE: Broad term for any cloth devoid of a nap.

BAREGE: Sheer gauze-like fabric of wool combined with silk, cotton or other fiber. Used for veils, dresses, etc. Fiber content must be declared. Named for town in France where it was originally made.

BARK CREPE: A woolen or rayon fabric that produces the effect of rough bark on trees. A crepe with much surface interest. Used in women's wear coating.

BARRACAN: A weather-proof cloaking made of wool and popular present day blends and mixtures.

BARRY, BARRE MARKS: Barré is the French term. Fabrics which have bars or stripes that would be detrimental to the finished cloth are given this name. The defects are usually seen in the filling direction and may be caused by uneven weaving, mixed filling yarn, poor or irregular yarn, etc. Warpwise defects of this nature are usually due to reeding faults and errors.

BASKET: A fabric weave of any material which, instead of having single threads interlace at right angles, is made by having two threads or more weave alike in both warp and filling direction, conjoined in the regular order of the plain weave. Effect noted is similar to straightly plaited cane basket work. Hopsack suiting and monk's cloth are examples.

BEAT-UP: Signifies the number of tufts per inch of length in a warp row of pile in carpet weaving. The term is used in connection with Axminster, Chenille and other materials not woven over wires and is synonymous with the term, wire, used in weaving Brussels and Wiltons.

BEATING-UP: The third and last motion in the action of a loom. It is the beating of the loose pick in the shed of the loom into its proper place or component part in the cloth. Beating-up is done by the action of the reed, which is a comb-like device through which the warp ends are drawn. The reed has a to-and-fro motion in its action.

BEAVER: The largest amphibious member of the rodent family, is found in Europe and America. Beaver fur, like Muskrat, is considered the best for felt hat manufacture. Coming from an animal which weighs about forty pounds, the fur has an average micron count of 15.8. It is soft and silky and lends itself to textile use. The hair is used by this industry only when certain shiny effects are desired in blends. Considerable demand exists for beaver pelts in the fur industry. They are plucked and sheared and because of the light belly portion, they appear to be striped. Canadian Beaver has a blue-brown fur fiber while other animals vary in shading from light brown to pale tawny. Unlike the early nineteenth century, when the fur was used in the manufacture of beaver hats and the shiny, coarse guard hair left on the skin for ultimate use as stoles for priests and royal officials, today finds the pelt used in fur coats and in trimming fur and fabric garments. The wholesale price of an average good Beaver pelt for furriers is about $45 to $50. The price of Beaver fibers prepared for the textile trade is $20 per pound. This is due to the fact that for the latter industry only the Beaver pieces are used. They are pasted on paper and then cut as skins and blown.

BEAVER CLOTH: 1. A heavily-napped, face-finished overcoating which has the softest feel and the longest nap when compared with the other cloths in its group — melton, kersey, and broadcloth. The grade of wool used accounts for the high quality of the goods — a 64s or better of half-blood wool.

Weaves used to make this double cloth material include a 2-up and 1-down twill arranged in a one-and-one order, one face end followed by one back end; or the order may be two face ends and one back end; a 3-and-1 crowfoot weave on the face may be used while the back weave would be a 1-and-3 crowfoot, thereby improving the stitching or interlocking of the two cloths into the fabric. Stitching is usually done with a three-harness twill or a small satin construction. Other combinations may be used.

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AWASAI: An ideal carpet wool from Mesopotamia and very popular among carpet manufacturers in America.

AWASSI KARADI: Raised in Persia (Iran), this popular wool is ideal for use in the manufacture of carpets and rugs. Great amounts of the wool are shipped to the United States. The staple is short, strong, resilient, and its great use is filler stock in carpeting.

AXMINSTER: A cut pile woolen fabric, 7 tufts to the weft inch inserted throughout guiding tubes into cotton chain warps and bound with a heavy Kraftcord of jute weft filling and binding yarn carried by a needle thrust to weave a 3-shot construction. Unlimited in use of colors in design, the Axminster weave is identified as rollable warpwise but not weftwise.

"B. A. WOOL": See Argentine wool.

BABY COMBING WOOL: Fine, choice wool fiber which ranges from 1½ inches to 2½ inches in staple length. The French method of combing is used to make high grade worsted yarn from the stock.

BABY FLANNEL: A plain weave, bleached, lightweight, soft woolen cloth used in children's underwear and garments. The nap on the cloth is variable as to length, thickness and wear, dependent on the texture and the quality of the stock used. The predominant colors are pink and blue.

BACK: The underside of cloth as it is being woven in the loom; in silk weaving, however, the fabric is usually woven face-down.

BACK FILLING: An extra filling woven into a cloth to add weight strength, warmth, or to define a pattern such as pique, Marseilles quilting, Frenchback, overcoating, etc.

BACKED CLOTH: Single texture material with addition of an extra warp or filling that is added for weight and warmth. The extra warp or filling may be of wool, worsted or cotton. This type of construction is found in Frenchbacks, vestings, worsteds, dressgoods, suitings and skirtings. Satin weave constructions, as well as twill weaves, may be used in the designing of the cloth.

BACKED FABRICS: Cloths made with three sets of threads — one warp and two fillings, or two warps and one filling. The former is known as a filling backed fabric; the latter, a warp backed fabric. The extra warp or filling adds weight to the cloth, gives greater warmth and helps to cover up the spaces between the interlacings of the warp and filling threads. Cloths of this type have a wide range of design and variety. Backed cloths are used for coating, suitings, vestings, trouserings, novelties, fancies,

blankets, decorative cloths and Frenchbacks. Much of the material is relatively low in price.

BACKING: The extra warp or filling employed in forming the back of faced cloth.

BACKING-OFF: Spinning term which means the uncoiling of slack yarn from the spindle on the mule; occurs between the spinning and winding-on periods. The yarn which extends from the spindle by the reversal of the spindle is unwound and carried by the winding faller into correct position for winding on the cop.

BACKWASHING: The removal of the oil which has been put into worsted stock in the blending, oiling and mixing operations when the mix was made up. The fibers are washed in an emulsion and then treated with a weak acetic acid bath and warm water to complete the scouring. This is done as the oil put in during the auxiliary processes is no longer needed for the smooth running of the stock through the machines which follow backwashing. Final rinsing completes the scouring of the fibers, and they are then dried.

BACTRIAN CAMEL: See Camel.

BACTRIAN WOOL: Long, irregular hairy fibers obtained from camels. Mixed with cotton and wool, it is made into lining fabric for outerwear garments.

BAD START-UP, SET-MARK: On older types of looms they were caused when filling became exhausted, thereby causing the weaver "to find the pick" before weaving could continue. Modern looms with battery and feeler motions are immune to these blemishes; however, in weaving filament yarn, and sometimes spun rayon, set-marks are made by the sudden and rather violent stoppage of the loom because of a severe braking action. The shock of violent stoppage will often stretch rayon, and when once in that condition will remain so. This will rarely happen when weaving cotton, woolen or worsted fabrics.

Bad start-up may be caused by faulty beginning when the loom is put in motion. Other causes include incorrect drawing-in or reeding-in, ends out, rolling selvage, too much moisture in the weave shed, faulty picker sticks, etc.

BAG: Small lot or sack of wool with a tare of about three pounds.

BAGDAD WOOL: Dark carpet wool from Mesopotamia; much used in this country.

BAGGY FABRIC: A loose place in a cloth which gives the appearance of a bag or pocket. Some double plain cloths show this effect because of the manner of construction; where the face and back of the cloth do not interchange there is the tendency for this pocket to appear.

BAKU: An oriental hand-knotted woolen carpet.

BALE: 1. A compressed pack of wool of a convenient form for transit, varying in weight from 150 pounds to 1,000 pounds, in the countries of production. Australian bales weigh about 300 pounds. Argentine bales, 1,000 pounds. Burlap is used as the covering.

2. Cotton bales vary much in size and weight. The American bale measures 54 x 27 x 27 inches, and weighs about 500 pounds. Other bale weights are: Sea Island, 380 pounds; Egyptian, 750 pounds; Indian, 400 pounds.

3. The average European silk bale weighs 100 kilos or 220 American pounds. Japanese and Shanghai bales average 133.33 pounds; Canton, 106.67 pounds.

BALLING, BALL WARPING: Either term signifies the winding of slivers of worsted top into convenient balls to facilitate their use in ensuing machine or for top dyeing.

BALLING HEAD: A delivery device used on worsted cards, gill boxes, etc., in worsted yarn manufacture. The web of fibers as they come from the doffer roller of the worsted card are converged and condensed into a sliver formation for passage through a trumpet device to be wound onto a headless wooden spool about 18 inches long. The balling head attachment may be at the center or side of the delivery end of the machine. A balling head resembles a cheese in appearance.

BALMACAAN: Named after a Scottish moor, this loose-fitting topcoat is made of homespun or tweed, and is characterized by the natty raglan sleeve, which permits free arm and shoulder action.

BALMORAL: A strong, heavy, British woolen fabric made on a twill weave; stripes of red, blue, black and gray feature the material.

BANBURY PLUSH: Made of cotton warp, woolen filling and wool pile effect, this plush is popular in England.

BANNOCKBURN: Name is derived from village of that name which is about twenty-five miles from Glasgow, Scotland. Obviously, this is a tweed center. Cloth should be made with alternating single and two-ply yarn, the latter being of contrasting colors. Used for suitings and topcoatings, and always in demand. One of the best tweeds on the market and is a typical British fabric. The battle of Bannockburn was fought in 1314.

BARATHEA: Fine textured material of broken filling character. Made of silk or rayon warp and woolen or worsted filling. Other combinations may be used. High quality stock is used in making this cloth. Used as mourning materials and in cravat cloth. Cloth is black as a general thing.

BARB: 1. The starched fabric which covers the throat and extends from the chin to the upper chest, a part of the headdress worn by nuns of religious communities. This linen, cotton or combination material was formerly worn by mourners in many sections of the world.

2. The small protruding scales found on animal fibers; used in the hat industry, these barbs make it possible for the fur fibers to be felted.

BAREFACE: Broad term for any cloth devoid of a nap.

BAREGE: Sheer gauze-like fabric of wool combined with silk, cotton or other fiber. Used for veils, dresses, etc. Fiber content must be declared. Named for town in France where it was originally made.

BARK CREPE: A woolen or rayon fabric that produces the effect of rough bark on trees. A crepe with much surface interest. Used in women's wear coating.

BARRACAN: A weather-proof cloaking made of wool and popular present day blends and mixtures.

BARRY, BARRE MARKS: Barré is the French term. Fabrics which have bars or stripes that would be detrimental to the finished cloth are given this name. The defects are usually seen in the filling direction and may be caused by uneven weaving, mixed filling yarn, poor or irregular yarn, etc. Warpwise defects of this nature are usually due to reeding faults and errors.

BASKET: A fabric weave of any material which, instead of having single threads interlace at right angles, is made by having two threads or more weave alike in both warp and filling direction, conjoined in the regular order of the plain weave. Effect noted is similar to straightly plaited cane basket work. Hopsack suiting and monk's cloth are examples.

BEAT-UP: Signifies the number of tufts per inch of length in a warp row of pile in carpet weaving. The term is used in connection with Axminster, Chenille and other materials not woven over wires and is synonymous with the term, wire, used in weaving Brussels and Wiltons.

BEATING-UP: The third and last motion in the action of a loom. It is the beating of the loose pick in the shed of the loom into its proper place or component part in the cloth. Beating-up is done by the action of the reed, which is a comb-like device through which the warp ends are drawn. The reed has a to-and-fro motion in its action.

BEAVER: The largest amphibious member of the rodent family, is found in Europe and America. Beaver fur, like Muskrat, is considered the best for felt hat manufacture. Coming from an animal which weighs about forty pounds, the fur has an average micron count of 15.8. It is soft and silky and lends itself to textile use. The hair is used by this industry only when certain shiny effects are desired in blends. Considerable demand exists for beaver pelts in the fur industry. They are plucked and sheared and because of the light belly portion, they appear to be striped. Canadian Beaver has a blue-brown fur fiber while other animals vary in shading from light brown to pale tawny. Unlike the early nineteenth century, when the fur was used in the manufacture of beaver hats and the shiny, coarse guard hair left on the skin for ultimate use as stoles for priests and royal officials, today finds the pelt used in fur coats and in trimming fur and fabric garments. The wholesale price of an average good Beaver pelt for furriers is about $45 to $50. The price of Beaver fibers prepared for the textile trade is $20 per pound. This is due to the fact that for the latter industry only the Beaver pieces are used. They are pasted on paper and then cut as skins and blown.

BEAVER CLOTH: 1. A heavily-napped, face-finished overcoating which has the softest feel and the longest nap when compared with the other cloths in its group — melton, kersey, and broadcloth. The grade of wool used accounts for the high quality of the goods — a 64s or better of half-blood wool.

Weaves used to make this double cloth material include a 2-up and 1-down twill arranged in a one-and-one order, one face end followed by one back end; or the order may be two face ends and one back end; a 3-and-1 crowfoot weave on the face may be used while the back weave would be a 1-and-3 crowfoot, thereby improving the stitching or interlocking of the two cloths into the fabric. Stitching is usually done with a three-harness twill or a small satin construction. Other combinations may be used.

In the finishing of a beaver great care must be exercised in all operations. After running through the soaper, the cloth is fulled from six to ten hours. It is scoured in the same manner as melton, de-tacked, rolled, and then run through a bath at 180 degrees, Fahrenheit, for about twelve hours.

Operations, in order, that follow include napping, wet shearing, dry gigging, wet shearing, and then dry gigging. Pressure steam is applied and the cloth is allowed to cool off before removal. If the fabric is to be carbonized the same methods as applied to meltons will suffice.

The final operations, in order, then include wet gigging, blowing, finisher shear, wet brushing, and drying. Decating is optional. Pressing, steam brushing, and examining complete the gamut of finishing operations.

The finished fabric resembles the fur of the animal of this name. Beaver is a formal and natty material when made into a garment, and gives excellent wear and warmth.

2. A slang expression for tall hats made of felt or silk; originally, the term implied any hat made of beaver fur.

3. A flat, rather heavy silk plush used to make hats.

4. The short, thick, velvet-like fur from the animal of that name which has a rich brown coloring. The fur is used in fur garments, hats, and muffs.

BEAVER, ENGLISH: Originally made in England, the fabric is supposed to simulate the fur of the beaver. It is a thick woolen fabric with a napped finish; the length of the nap varies with the cloth and its use. Twill weave construction is used in the cloth, which finishes around 50 inches. Other cloths have superseded English beaver to considerable degree.

Cotton beaver simulates the woolen fabric of this name. It is double-faced cloth, napped on both sides, and is used for caps, shoe linings, and where work is required, as in sports clothes, work clothes, and maritime circles.

BEAVER FUSTIAN: A heavyweight material made in this country since the early part of the nineteenth century, chiefly in the Philadelphia areas. This coarse, rough overcoating fabric similar to kersey is made in dark blue and is used in overcoating.

BEAVER SHAWL: Made of a reversible or broken twill, this woolen shawl fabric is heavy in weight.

BEAVERTEEN: A stout, solid color, cotton twill cloth similar to fustian. Napped on the back and sheared after dyeing, it is used for hunting clothes, chiefly in the British Isles.

BEDFORD CORD: The practice of adopting English localities for the names of many cloths, not necessarily of local make, is again resorted to in naming this material. Cloth has longitudinal cords that run in the warp direction. Used for coatings, suitings, riding habit cloth and uniform material. The color of the cloth resembles that of covert cloth. Bedford cord is the sister cloth of piques which should have their cords in the filling direction. The corded effect is secured by having two successive ends weave in plain weave order, thereby actually holding the fabric in place and showing the cord plainly. Cotton, silk, and rayon Bedford cord are also made today for the trade. Incidentally, New Bedford, Mass., is also claimed as the home of Bedford Cord.

BEIGE: 1. Taken from the French for natural, it means cloth in the natural or undyed state.

2. A lightweight dress material made of cotton, worsted, rayon or union yarns. This low-texture, piece-dyed or printed cloth is made on a 2-up and 2-down, right hand twill.

3. As a color the term implies any material which has a light tan or ecru shade; an ever-popular color for women's wear.

4. A domestic dressgoods fabric made of grandrelle or print yarns. Plain or small twills are used in construction and yarns are black and white, or gray, if grandrelle; sliver printing may be resorted to, as well.

5. A twill-woven fabric consisting of fibers dyed prior to yarn spinning. Various colored fibers and stock are often used to give a mottled effect to this all-worsted fabric, which uses a 36s yarn in warp and filling and has a texture of about 76 x 72. Sometimes spelled Biege.

BELLY WOOL, BELLIES: Wool from the belly, fore and hind legs of a sheep. It is short, dirty, tender, and irregular and contains much foreign matter. This stock is sorted apart from the fleece and has little value.

BELWARP: English worsteds which simulate American chain-break worsteds.

BEMBERGIZING: Worsted yarn is given a high lustre and some elongation by this process, which originated in Germany. The stock is treated in shrinking. The yarn is then boiled in a weak mineral acid for about an hour, under relaxing tension. Rinsing follows to complete the treatment.

BENGALINE: Cross rib material, with filling yarn coarser than warp. Made of silk, cotton, rayon and wool, or of silk and wool. Comes dyed. Used in dresses, coatings, ribbons. The cloth has compact texture.

Wears well, launders well if care is taken; good draping qualities. Pronounced filling cords add much to the cloth. Widths range from ribbon size to broad goods. Used much as mourning fabric.

BENI-AHSEN: Raised in northern Morocco, this breed is known for its neck folds of wool and all-over dense fleece, which may even reach to the hooves of the animal. Staple is about four inches.

BENI-GUIL: A medium sized Moroccan sheep known for its white fleece and colored legs.

BENI-MESKINE: A mutton sheep of Morocco.

BERGAMO, BERGAMOT, BERGAMEE: All-wool rugs from Asia Minor in which warp and filling are fully dyed. Ghiordian knots are used in making the long pile. Floral or geometrical patterns are seen in these red-to-orange color effect rugs, which are made with a red selvage and are bound with a short fringe. Hemp, linen and cotton may be used in making the cheap qualities of this rug.

BERLIN YARN: Also called German wool yarn, this high-quality knitting yarn is either wool or worsted; finds much use in high-grade winterwear knit goods.

BERRY WOOL: A splendid wool of France that is white in cast, of good fiber fineness, choice staple, and possesses some curliness. Fleece weight is about 5½ pounds.

BHARAL: The wild sheep of the Himalayas, Ovis nahura.

BIEGE: A lightweight dress material made of cotton, worsted, rayon or union yarns. This low texture, piece-dyed or printed fabric, is made on a 2-up and 2-down right hand twill weave. The term is not to be confused with beige, a popular light tan or ecru color. Biege, as a term for use in the textile and apparel trades, is used rather broadly.

BIG HORN, ROCKY MOUNTAIN SHEEP: Wild sheep of California of the same species as Argali.

BILLIARD CLOTH: The highest grade of material made from the best of stock — Saxony, Silesia or Australia merino wool. Two up and one down twill weave is used. Cloth must have body, substance, evenness and smoothness. Set in the reed at 144 inches and is finished at about 72 inches. Dyed green and its use is obvious.

BILLY: British term for a woolen roving frame.

BINDER, BINDING WARP: Ends or threads used in cloth construction to bind or hold two or more textures in place. These special threads weave over and under the face and the back threads in the weave according to some plan or motif that will work well with the basic weaves in the construction. Binder ends are used in Bedford cord, beaver, chinchilla, face-finished cloths, kersey, melton, pique, plaid-back overcoating, etc.

BINDER PICKS: Those used in cloth construction which hold rather long floats or pile effects in place. These picks have to stitch properly with the face and back filling arrangements in the cloth.

BIRDSEYE: 1. When applied to a worsted fabric it implies a clear finish, staple material, the face of which is marked by small indentations produced by the weaves used to suggest the eye of a bird.

2. In cotton cloth, birdseye and diaper material are considered the same. The goods are soft, light, absorbent and may be a union fabric. 30s warp and 16s filling are average size yarns; the texture is about 66 x 46. Novelty twills and small diamond effect weaves are used in the construc-

tion. No starch is applied to the cloth because the absorption properties must be of the best. Foreign matter is also missing in birdseye, the filling of which is loosely twisted.

3. Linen fabric of this name is used for toweling, particularly for babies. The cloth is soft, lustrous, absorbent in order not to produce friction or chafing when in contact with the skin. Frequent washing of the material causes it to lose its excessive absorbing power that rougher surfaces might have.

BIRETTA: The ordinary headgear of priests of the Roman Catholic Church. It is made by covering heavy cardboard with black, white or brown silk, velvet or woolen fabric. The biretta gives good wear because of the compact texture of the material and the technique used in making it. It is not advisable to wash the biretta. Priests wear black; bishops, purple; cardinals, red.

BIRETZ: A double-faced, reversible fabric of silk or rayon and wool; one side has a corded effect while the reverse is made on a twill construction. Sometimes known as Electoral Cloth.

BLACK-FACE WOOL: A medium, long, kempy, lustrous wool obtained from the black-faced sheep of Scotland. This fiber, excellent for carpet yarn, is often used in mixes and is usually stock dyed.

BLACKHEAD PERSIAN: An original breed of North Africa but now raised throughout that continent and elsewhere. The fleece is much sought for, since it is strong and smooth. Much used in making fur coats. The Union of South Africa, Afghanistan and Iran are three chief centers which supply the American trade.

BLACK SUPERFINE: Name for the splendid woolens of the West of England. Fulling, napping, shearing and final finishing make the goods ideal for dress suits.

BLACK-TOPPED WOOL: Much dirt and grime is found in Merino fleeces because they have the highest percentage of yolk in them. This condition gives the wool a dark, muddy appearance bordering on black.

BLACK WOOL: Any wool that is not white, but not necesarily black. Stock that is gray or brown in color is classed as black wool.

BLANCHET: Originally made in France, this woolen cloth was used as a nightdress. Today, the term refers to bathrobing and the garments made from the material.

BLANKET: This cloth is named in honor of the man who first used it as a covering for warmth and sleeping purposes, Thomas Blanket (Blanquette). He was a Flemish weaver who lived in Bristol, England, in the 14th century. The cloth is made of wool, worsted or cotton, or by combining these fibers in varying percentages in the construction. Material is heavily napped and fulled. Used for bed covering, robes, steamer rugs. An essential cloth to people in the Temperate Zone.

BLANKET RANGE: A sample range or warp which runs from 6 to 10 yards in length, and is used for experimental purposes to bring out new color arrangements and patterns.

The width of the sample warp is divided into a convenient number of sections, say six sections, each of which may be 9 inches wide. Each section has its own warp color arrangement and the yarns are often the same size or count. All sections are wound onto the same beam.

When the loom is started the filling for the first section of the warp is used and about 12 inches of cloth is woven. This will be the only section where the warp and filling yarn match and give a solid effect. Then 12 inches of the second-choice filling is woven into the goods, making a solid block in the area covered by the second section of the warp and the second filling. Thus, it continues until all six sections have been woven; there will be a solid block of single color patterns running from the lower left hand corner of the blanket to the upper right hand corner of the goods in the diagonal direction.

From the above plan it will be observed that for each filling used there will be one planned area of cloth and five accidental areas, all running across the goods in each 12-inch space. This particular blanket would have six planned blocks and thirty accidental blocks, a total of thirty-six new patterns in the range. Often the accidental blocks prove to be more popular in the trade than the planned areas.

BLANKETS, DATA ON: The majority of blankets today contain varying percentages of cotton, which necessitates the following information seen on the labels:

1. "All-wool" means that the wool content is from 98% to 100%.
2. "Percentage of wool content in blanket" varies from 25% to 98%.
3. "Part-wool, not less than 5 per cent," implies that the article contains 5% up to 25% wool fiber.
4. Blankets that cannot be marked with the word "wool" have from zero to 5% wool content.

Wool is a non-conductor of heat, cotton does conduct heat; therefore, at least 25% of a blanket should be composed of wool fibers to supply warmth to the sleeping person.

Bed blankets come in the following sizes:

1. Singles.....60 x 80, 60 x 84, 60 x 90 inches.
2. Three-quarter...66 x 80, 70 x 80, 72 x 84, 72 x 90 inches.
3. Double.....72 x 84, 72 x 90, 80 x 90 inches.

Blankets should be made so that they will readily tuck in or drape well over the edge of the bed.

BLEACHERS: General name for gray goods woven for bleaching purposes.

BLENDED FABRIC: One which contains blended yarns in either the warp or the filling.

BLENDING: Taking different wools of the same grade which possess certain characteristics and causing them to be laid layer upon layer in the blending room of the mill. This is done for the purpose of producing a mixture that will meet a definite need which may be a certain price, a special softness, luster, strength, color or felting property. It is also possible to blend wools of different grades as well as to combine other fibers with the basic stock used. Practically all major textile fibers may be blended in varying percentages to suit some particular mixture and need.

BLENDS OR COMBINATIONS OF NATURAL AND MAN-MADE FIBERS: Blends are taking on increasing importance in the fabrics of today and tomorrow. Through the use of such combinations, not only is there effective replacement of some of the scarcer natural fibers, but fabrics made from combinations seem to have novel effects and qualities not heretofore possible. The blending of staple fiber with wool, for example, has made possible the production not only of fabrics ideally suited for men's and women's outerwear, but also such items for the home as blankets, rugs, decorative fabrics, upholstery, etc.

In these so-called blends, the fibers combined may be any of the natural ones or any of the man-made types in spun or filament forms. These mixtures should not be considered as substitutes but as members of the textile family, along with well-established fabrics seen in the market, some for many years.

The actual process of blending may be varied according to the effects which are desired. It is possible to ply the yarns by combining two or more ends which have been previously twisted together. Sometimes the blending is done in connection with the carding process, or a core yarn of one type may be used around which another yarn may be spun. Then, of course, there are many variations which can be obtained through interchanging the content and the kind of warp or filling yarns.

Individual manufacturers may employ one or all of these methods of blending fibers. The results are interesting and seem to be appreciated by the consumer public. They will doubtless play an important part in the future textile world since some blends in fabrics are of the conservative type, others seem to be rather wild, conspicuous or "shot-about" in surface effect.

While it is generally possible to blend any or all fibers more or less, utmost attention should be given to the experimental work, fabric construction, fabric control, and marketing possibilities.

BLOOD: A term used in connection with various fractions (½-blood, ¾-blood) to denote the percentage of Merino blood in a certain sheep. In common practice today the term denotes any wool that is of the same fineness as the wool grown on such a sheep. Full-blood Merino implies that the wool comes from the offspring of a Merino ram and ewe.

BLOWFLY: Larvae of the fly which attacks sheep, usually around lambing time; often wreaks havoc in the flock.

BLOWING: A type of crabbing wherein steam is blown through the material while it is wound on a perforated roller.

BLUE WOOL: 1. The best quality combing wool in the old English wool sorting system.

2. The choice stock from an ordinary luster fleece from cross-bred or English wools.

BOBBIN: The device upon which the filling yarn is wound. It sets around the spindle shank of the bobbin, and is then set into place in the shuttle. The latter passes through the shed of the loom in order to place the loose filling pick between the raised and the lowered warp ends. A full bobbin has yarn wound on it in a snug manner, so that the filling will come off the nose of the bobbin in an easy, uniform manner.

BOCKING: Floor covering made of low grade, coarse wool.

BODY CLOTH: A blanket or covering used on horses; is a coarse, heavy material usually made of low quality wool.

BOLCHE: Shirting material used by the clergy of Southern Europe. Plain weave cloth made of good stock and left in undyed state.

BOLIVAR: Dressgoods of a light weight, low in texture and of the woolen flannel group of cloths. Dyed solid shades.

BOLIVIA: Light, medium, or rather heavy weight cloth. Has napped face and usually piece dyed. A 3-up and 3-down twill or similar weaves used in making the cloth. This cloth "is made in the finishing." There are several types of finish available. Weight ranges from 9 to 16 or more ounces per yard.

Cloth is a cut pile, with lines or ribs cut in the warp or in the diagonal direction. The height of the pile varies much. Bolivia is used for cloakings, coatings, and has appeared in suiting cloth. Weave, color and finish are salient selling features.

BOLT, CUT, LENGTH OF CLOTH: These terms are used to designate the length of the woven cloth as it comes from the loom in the gray goods state or in the finished length in the trade. Men's wear and women's wear cloth in the woolen and worsted trade will range anywhere from a 50-yard piece to a 100-yard length. The most popular cut lengths seem to be 55, 60, 72, 75, 80, 90, and 100 yards. These lengths are the most desirable for the cut-fit-and-trim trade. Cotton lengths usually run from 40 to 50 yards. Rayon and silk cloths usually range from 38 to 40 yards; however, lengths other than these are used when warranted.

BOMBAZET, BOMBAZETTE: 1. A French dressgoods fabric which has a smooth, rather glazed effect enhanced by the weave construction used — plain or small twill. This thin fabric comes in white or colors and can be produced in stripe effects.

2. A cloth similar to the above but made with Bradford or English spun worsted yarn. Singles yarn is used and the cloth is devoid of luster or glaze.

BOMBAZINE: Name comes from the Latin "bombycinum," It means cloth made of silken texture. One of the oldest textile materials known, Bombazine has gone through many changes through the ages. Originally it was an all-silk fabric. From time to time other fibers have been used in making the cloth. Today this cloth is made of silk or rayon warp and worsted filling. Imitations in cotton are seen on the market. When dyed black it is used in the mourning cloth trade.

BONNET WOOL: Scotch term for fine short wool taken from the head and neck area of the sheep when sorting skin wools.

BORDER LEICESTER: A long wool developed in the area between England and Scotland, combining English Leicester and Cheviot characteristics. The shrinkage is about 25 per cent and the wool is classed as 44s to 48s.

BOTANY: This name on any fabric or ready-to-wear apparel means that the material was made in the Botany Mills, Passaic, New Jersey. Botany Brand is a registered trade mark in about twenty foreign countries.

BOTANY BAY WOOL: Formerly classed as the best wool in the world, Class 1 Merino in quality, it spins to the highest of worsted yarn counts — 70s and 80s.

The term today implies Merino wools of high, fine quality with superior working properties. The real Botany wool is grown in an area about 100 miles from the wool center of Sydney Australia. It is used in the most expensive suits and dressgoods, billiard cloth, dress-suit fabrics.

BOTANY TWILL: English dressgoods, of mill construction made solely from Botany Bay, Australian wool; a very high grade material.

BOTANY YARNS: Fine wool, rated at 60s or better in classification, is used in these high quality worsted yarns.

BOUCHE: A plain weave, fine French woolen fabric left in the undyed state. Used as a shirting material, this cloth is much used by the clergy of southern France. Some time called Bluché.

BOUCLE: From the French name meaning "buckle or ginglet. A staple suiting fabric on the order of worsted cheviot with drawn out, looped yarn construction. These yarns have a "ring appearance" on the face of the goods.

The yarn is made from the major fibers and is a popular stock in woven and knitted fabrics. Examples of the yarn are frisé, frotté, ondé, ondulé.

BOX CLOTH: A heavy, coarse, buff or tan-colored melton used for overcoating and habit cloth. Whipcord, covert and heavy tricotine or elastique are sometimes substituted for the melton. All of these cloths may be used in formal types of clothing, and for this reason, are usually made water-repellent.

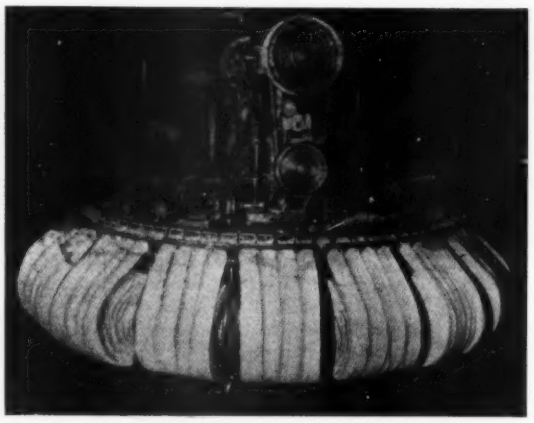
BOX LOOM: A loom with shuttle boxes on each side of the raceplate or raceway. The number of boxes may vary. In the weaving of checks, ginghams, over-plaids, plaids, and similar patterns there will be one shuttle box on the one side of the lay and as many as seven boxes on the opposite side of the raceplate. This permits the use of seven colors in the filling motif used in the cloth. This arrangement makes it possible to obtain balanced and symmetrical designs of multi-colored type.

Men's and women's wear looms, which take care of fabric up to 60 inches in width, have four boxes on each side of the raceplate. By this arrangement seven shuttles may be manipulated in the eight boxes without any trouble. The boxes are raised and lowered according to the plan worked in the box chain in the loom. Each shuttle can be brought into play at the proper time. Care has to be exercised in the building of the box-chains and pattern chains since mistakes, blemishes, or shuttle smashes impair weaving production.

Advantages of the four-box type of loom reveal that the designs may have a single pick of colored filling placed in the goods; a seven-and-one arrangement requires two picks of filling. In the pattern construction the shuttle must go to the other side of the loom and then back into its original box before another shuttle can swing into action.

The pattern chain regulates the raising and the lowering of the harnesses so that the correct harness will be raised at the proper time in order to make raisers in the cloth according to the design.

BOX LOOM EFFECTS: Produced on a loom by which different colors of filling may be woven into the fabric by raising or lowering the required shuttle into the picking plane. Different colored cross-stripes are therefore possible in the filling direction, and are possible in fabrics such as plaids, tartans, blankets, dressgoods, ginghams, etc. The loom is often referred to as a multiple-box loom.



BRADFORD, ENGLISH NOBLE CIRCULAR COMBER.

BRADFORD LUSTER FABRICS: Used chiefly for dress and lining fabrics, this English term may imply the following fabrics: alpaca, brilliantine, Florentine, glacé, grenada, Lorraine-luster, luster linings, melange luster, Pekin stripes, and Sicilians.

BRADFORD SPINNING: English method of spinning wool into worsted yarn. The wool is thoroughly oiled before it is combed, which produces a smooth lustrous yarn used for worsted suitings. This is distinct from the French system, which is dry spun.

BRAID WOOL: Wool grading term more or less synonomous with luster wool. Compared with Merino stock, it is low in quality and is used in medium and low quality clothing, carpets, robes, blankets, and low-priced uniform fabric.

BRAMWELL FEED: The automatic hopper-like feed set before the first card. The wool is carried to the top of the hopper by a series of spiked lattices, where it is weighed, evened-off and then dropped through the weighing pan onto the feed table, which presents the stock to the feed rollers.

BRAYING: English term denoting the scouring of woolen gray goods from the loom.

BREAK: Wool fibers, otherwise sound, which have weak, kempy places in them. Drought, disease and lack of forage are the causes.

BREAKER CARD: The first card in either a three-set or a four-set carding arrangement for wool fibers. Made up of feed rollers, burr breast, main cylinder, a set of worker and stripper rollers, usually seven or eight of each type, fancy and doffer.

The sliver from the card is automatically fed into the second card.

BREAST BEAM: That part of the loom where the cloth comes over the beam after being woven and leaving the temples. It is located where the weaver stands, at the front part of the loom. This beam runs parallel to the whip roll located at the back of the loom, and is in the same plane with it; it is perpendicular to the warp and selvage edges of the warp, which complete the flat plane which makes weaving possible.

The woven material, after leaving the breast beam, passes downward and under it where it comes in contact with the sand roller; from there the cloth is wound on to the cloth roller, which will hold many yards of the newly made goods. The breast beam is a vital support for a loom.

BREECH: See Britchwool.

BREECHING: Clumpy, dungy, matted wool from the buttocks of the sheep.

BREEDS OF SHEEP, AMERICAN: Their relative importance in this country at present are:

Breed	*Percent*	*Breed*	*Percent*	*Breed*	*Percent*
Rambouillet	26.80	Lincoln	1.59	Suffolk	0.48
Hampshire	22.66	Cotswold	1.43	Karakul	0.45
Shropshire	19.93	Corriedale	1.22	Tunis	0.14
Merino	12.37	Dorset	1.08	Blackfaced Highland	0.12
Oxford	2.90	Cheviot	1.04	Leicester	0.05
Southdown	2.84	Romney	0.57	Ryeland	0.04
				Unspecified	4.26

BREEDS OF SHEEP BY TYPE, AMERICAN: The classification follows:

Type	*Breed*	*Ram*	*Ewe*
Fine-Wool	Rambouillet	66232-B	66233-B
	Merino	59981-B	65002-B
Medium-Fine-Wool	Targhee	77829-B	77822-B
Medium-Wool	Hampshire	65076-B	65084-B
	Shropshire	65022-B	65030-B
	Oxford	65017-B	65052-B
	Southdown	55468-B	55463-B
	Columbia	50420-B	50423-B
	Corriedale	66250-B	67744-B
	Dorset	65006-B	65038-B
	Cheviot	65088-B	59985-B
	Suffolk	71203-B	71201-B
	Tunis	65029-B	65037-B
	Ryeland	7374-B	7824-B
Coarse-Wool	Lincoln	7390-B	18578-B
	Cotswold	65049-B	66247-B
	Romney	6731-B	6771-B
	Leicester	3346-A	3174-A
	Blackfaced Highland	5675-B	37133-B
Fur	Karakul	37139-B	37845-B

BREEDS OF SHEEP, NEW AMERICAN: New breeds of sheep that have been meeting with favor in this country within the last few years include Columbia, Panama, Romeldale and Targhee. The first three of these new breeds are of the medium-wool type, while Targhee is of the medium fine-wool type.

BRIGHT WOOL: A common term applied to wool raised this side of the Mississippi River, where the farm system of sheep raising is popular. Contrasted with semi-bright and Territory Wools, bright wool is light in cast, contains less dirt and other foreign matter, and is a clean type of fiber.

BRILLIANTINE: Cloth in which a birdseye pattern is woven into the material on the Jacquard loom. Calender finish is given the goods. There is another fabric of the same name, made of cotton warp and luster worsted filling. Lincoln wool is often used for the worsted filling. The cloth may be woven on a plain loom or Jacquard to give figures. Some of this dressgoods fabric is made with mohair or some other hair fiber filling.

Printed Brilliantine is an imitation of the woven fabric.

BRITCH WOOL, BREECH WOOL: Wool from the lower thighs or hindquarters of the sheep, usually the coarsest type found in the fleece. It has considerable length but is very irregular and of little value. This wool is used in cheap suitings and coatings, windbreakers, ski cloth, mackinac material, and carpets.

BRITISH WARM: A heavy, warm, greatcoat worn in cold weather by British army officers. The cloth used may be chinchilla, melton, kersey, beaver or similar face finish fabrics, all dyed the regulation army shade.

BROAD: A straight-fibered, non-elastic wool.

BROAD GOODS: Woven goods of silk and/or rayon that are 12 inches or more in width; includes cloths to be used in the manufacture of neckwear. English practice is to classify any over 18 inches as broad goods.

BROAD WOOL: Term for a non-elastic, straight-fibered wool that is low in serrations per inch.

BROADCLOTH: Originally the opposite of so-called narrow cloth. Considered as an inferior material. Modern broadcloth is a term used today with no particular significance and covers a host of materials. Unless made of silk, rayon, or cotton, the cloth in the woolen and worsted trade with regard to quality and classification, is a splendid fabric made in staple colors, has a compact weave, and receives a high lustrous, appealing finish.

In men's wear, black broadcloth has a limited use since it has been superseded by dress worsteds for evening and full dress purposes. The fabric is still popular in legislators', diplomats', and other formal circles.

In the same group of face-finished fabrics as beaver, kersey, and melton, popular broadcloth runs from 10 to 16 ounces per yard. An ideal weave to use is a 2-up and 1-down twill, with the goods woven face down. Some of the material may be made with a plain weave. The material is set very wide in the reed of the loom to allow for the great shrinkage in order to obtain the proper width. Higher qualities of the goods are form fitting and ideal for women's wear tailored suitings, where drapiness and clinginess are essential.

In women's wear, the cloth is popular since it comes in a variety of popular colors and is conventional. The crowfoot weaves are ideal for use in the women's wear cloth.

The following procedure may be used in finishing broadcloth; the stock and the finish given are comparable with beaver; fulling, however, is for about three hours, while all "raising" of the fibers must be done with utmost care since it is the lightest of the four cloths in this category — beaver, kersey, and melton. Only about one-half the raising as that used in a beaver will suffice in finishing broadcloth. Decating is a feature operation applied to the material. All four cloths and their finishes depend to a great degree on the original lay-out of the goods and the desired result. Costs have much to do with the final finish obtained.

Silk, cotton, and rayon broadcloths are rather soft, closely woven, of good texture and receive smooth, satin-like finish. These fabrics find much use in shirting, dressgoods, coats, pajamas, waists, etc.

The term, broadcloth, is very broad and may, at times, be more or less of a mis-nomer. It is a popular term in the advertising of textiles and may be used indiscriminately when some fabrics to which the name is applied are analyzed. Incidentally, broadcloth may be said to belong to the family of terms which have several meanings, such as all-wool, camel hair, cashmere, crepe, cheviot, gabardine, shetland, serge, tweed, velour, etc.

BROADLOOM: Carpet woven wider than the ¾ (27″) and 4/4 (36″), usually 6, 9, 12, 15 and 18 foot widths.

BROADTAIL: 1. The fur of the unborn or prematurely born lamb of the black Persian sheep of Russia, Afghanistan, and Central Asia. It differs from true Persian lamb in the degree of mottling effect of the rich, black surface. As a garment, the coat gives fair wear, and it is judged by the sleek, flat surface and pattern. Worn chiefly for dress.

2. Another name for a baby lamb.

BROADTAIL FABRIC: Pile fabric, women's wear coating material which simulates genuine broadtail fur; often called Karakul.

BROAD-TAIL SHEEP: Another name for fat-tailed sheep.

BROCHE: 1. French for brocade. Applies particularly to figures swiveled in the weave design; a loom-embroidered effect. Used in novelty and fancy dressgoods.

2. A thin pin-stripe or line which runs in the warp direction in dressgoods, shirtings and suitings.

BROCHE CARPET: Wool carpet made with a figure which is formed by the cut pile over a Brussels ground weave.

BROKEN CHECKS: Woven check patterns in which, by weave effect, the checks are a trifle irregular as distinguished from the regular cubic form of the check.

BROKEN-END AND BROKEN-PICK: A warp end or filling pick that has become broken at some point in the weaving operation on the loom. Broken threads are fixed by the use of the weaver's knot, by twisting the two broken threads together, or by an ordinary knot. Threads that have become broken should be fixed at once, otherwise, the resulting cloth will be imperfect and classed as a "second."

BROKEN PATTERN: When the pattern or design has become broken because of some irregularity or error on the part of the designer or some operative. The woven pattern must be in strict accord with the original sample to produce required results and effects. Much broken pattern work occurs in weaving where the work of rectifying mistakes is not always done correctly.

BROKEN WOOL: Parts of a fleece that are irregular and weak. This is caused by the sheep being diseased or sick. There are some portions of the fleece that are unaffected. The term also refers to wool torn from a fleece.

BROKEN TWILL: This weave is made from a regular twill weave by running the twill in one direction for a desired number of threads and then reversing the direction of the twill from running to the right by causing it to run to the left, and by making as clear a break as possible at the "break" or "break-line."

A clear break in a weave is made by the placing of the raisers on the one thread opposite the sinkers of the adjoining thread; this is possible only in the case of certain even-sided twills.

An example of this would be to have the sinkers of the first thread of the left hand twill come opposite the raisers of the last thread of the right hand twill at the break-line.

Incidentally, all herring-bones are broken twills, but all broken twills are not necessarily herring-bone weaves.

BROKES: Wool of little use or value, taken from the neck and belly when the fleece is being sorted.

BROWN-HEADED MUTTON SWISS: Raised chiefly for mutton purposes, this sheep gives a good 2-inch staple and fleece of about 6 pounds.

BROWN WOOL, BROWN MATCHING: Wool sorting term for stock taken from the flanks of English cross-bred fleeces; spins to about 28s.

BRUSHED WOOL: 1. Knit or woven fabric which has been brushed, napped or teaseled. Used in some garments, scarves, sweaters, trimmings.

2. Term in the pulled wool trade which implies fibers taken from scrubbing or brushing that is given to the stock in order to remove burrs, shives, grit, dirt and other foreign matter. This treatment is given to the wool when it is on the pelt.

BRUSHING: 1. Done by various types of brushes, dependent on the material to be treated, it is the actual removal of loose fibers or yarns from the face of the goods.

2. Providing a nap for woven or knitted fabrics for pleasing surface effect. May be done by teasels or by card clothing roller clothed with fine, pressed steel wire similar to that found on the fancy roller on the cord.

BRUSSELS CARPET: Named after this important city in Belgium, the carpet was developed after 1700, when Belgium became the rival of England in making carpets. Brussels is a staple which is made in body, border and stair carpet sizes. There are 6 to 10 piles to the inch in texture. Tapestry and Body Brussels are in the Brussels group of fabrics.

Brussels is made with three-ply or four-ply woolen yarn. Tapestry is a printed carpet made with woolen or worsted yarn.

Within recent years carpeting called Brussels, made with a cut pile structure, has found favor here. There is a wide range of carpeting under the name and the variety and color patterns vary considerably.

B-TYPE MERINO: Higher than A-Type and lower in classification when compared with C-Type Merino, the wool is fine, strong, less wrinkled when compared with the A-Type but of longer staple.

BUCK: 1. A male goat used for breeding purposes.

2. In the Boston and Philadelphia markets the term means wool obtained from rams.

BUCK FLEECE: Fleeces shorn from rams.

BUCKSKIN: 1. A cotton cloth with a clear surface and napped back. Better grades are made with an 8-end, filling-effect satin weave, a base of three or five being used. An extra raiser is added at the top or at the right of the basic raisers in the repeat; this affords a tighter interlacing of the warp and the filling when compared with the ordinary eight-shaft satin construction. Cheaper grades of buckskin are usually made with a five-shaft satin weave.

2. A ruged, durable, woolen fabric made on an eight-shaft, warp-effect satin weave. The cloth is heavily fulled and napped, and is then cropped so that a smooth finish results. It is used for overcoating and riding breeches.

BUCKSKIN WEAVE: An eight-end satin weave made with a base of three or five; an extra raiser is added at the top or at the right of each of the basic raisers in the repeat. This affords a tighter interlacing of the warp and the filling when compared with an ordinary eight-shaft satin weave.

BUENOS AIRES WOOL: This wool constitutes about 50 per cent of the Argentine clip. The stock, mostly of the cross-bred variety, possesses good hand and ranges from 32s to 46s in quality. The term is often rather loosely used to imply the entire Argentine annual wool clip.

BUFFALO CLOTH: Mackinac cloth has replaced this once popular material. This cloth was heavy in weight, made from twill weave; the finished cloth had considerable nap. Found usage in the cold sections in winter. Fabric weight ranged from 20 to 30 ounces per yard.

BUILDER MOTION: A device used on slubbing, roving and spinning frames which causes the winding of the finished stock onto the bobbin in a firm, uniform manner.

BULL MUCK: English term for tops of poor and irregular quality.

BULL'S WOOL: Colloquial term for very low grade, coarse woolens.

BULL'S-WOOL-AND-OAKUM: Colloquialism for clothing fabrics of very low and inferior quality.

BUNTING: Plain weave, loosely constructed cloth made of wool yarn. Finds use in flags and buntings. Its open texture is suggested because of the fact that the material was originally used for meal sifting or bolting. The term is a corruption of this cloth, bolting. Not used in apparel. Piece-dyed. When made of cotton, cloth is boardy in feel since a low or medium thread count prevails and the cloth may resemble cheesecloth or scrim. May be dyed or printed.

BUR, BURR: 1. Seedy vegetable matter found in wool fleeces.

2. Tangled, knotty silk waste.

3. A small lump or nub found in woolen fabrics, particularly when the cloth is going through in the mill in the wet and dry finishing operations. Burlers remove these blemishes when they inspect the fabric. The term also refers to waste portions found in preparing raw silk for market.

BURBERRY: 1. A lightweight cotton cloth which has been mercerized and waterproofed. 2. A staple cheviot suiting, topcoating or overcoating made on a twill weeve. The cloth is shaggy, has good body and gives good wear, and is generally used for topcoats and overcoats.

BURDER: English term for woman operative in a woolen or worsted mill who does burling, mending, and specking in the dry finishing department of the mill.

BURL: A knot, nub, lump or slub in yarn or fabric.

BURLING IRONS: Used in the dry finishing department of the mill, these tweezers are used for burling fabric. Made of steel, they usually have a needle attachment which enables the worker to pick out tough nubs, loops or knots from the cloth so that they may be cut off.

BURL, SPECK DYEING: In reality, it is not actual dyeing but the "inking-on" over specks and particles of vegetable matter that are best treated by the use of ink. Many woolens and worsteds, because of their nature, show vegetable matter specks in piece-dyed fabrics. Special inks are used; they come in all colors.

BURLING: Linked with specking, mending and sewing in the dry finishing department of the woolen or worsted mill, it is the removal of as much objectionable matter as possible from the goods. The burler, with the aid of a burling iron or tweezer, removes loops, nubs, faulty knots, vegetable matter, etc.

BURMA: Lower in quality when compared with Indian types, this coarse wool finds use in the manufacture of carpets and rugs.

BURNISHING ROLLER: Comparable with the stripper roller on the carding machine, this roller is used to straighten and taper-off the pressed

steel wire card clothing of the various rollers of the card when they are being ground so that they can again perform their work on the card.

BURNOOSE: Woolen cloak with cowl attachment worn by Arabs, Moors, and other tribes in Africa.

BURR: 1. Texas and California wools are more or less infested with vegetable matter, chiefly burrs, which have the tendency to somewhat cause the wool to become matted. Burrs make it necessary to sell the fleece somewhat below the price of comparable wools raised elsewhere in this country.

2. A small lump, nub or slub found in cloth while it is being finished in the dry finishing department of the mill before the cloth is ready for wet finishing operations.

BURR BREAST: The first mechanical device, other than the Bramwell Feed, for the first breaker card, which consists of the feeding rollers, the breast cylinder with its two workers and strippers and burr guard. In sequence, there is a brush and burr cylinder plus another burr guard; the tumbler then presents the wool to the main cylinder. The function of the entire set-up, since it is clothed with garnett and similar clothing, is to open up the wool and thus admit of the taking out of considerable portions of burr, chaff and other vegetable or foreign matters.

BURR CRUSHER: The burr picker is equipped with one or more sets of crusher rollers which break open much vegetable matter found in wool as it is about to be given the burring treatment or after it has been carbonized.

BURR PICKER: A very rugged machine that aids mechanically in removing burrs, shives and other foreign matter from wool prior to blending, oiling and mixing. One large roller, and a series of smaller rollers, all with iron spur teeth, treat the raw stock in a rigid manner as it passes between the cylinder and the rollers that make up the set that comes in contact with the main roller. Foreign matter is beaten out. Burrs and shives in wool would seriously hamper the stock in its course through the many operations from raw material to yarn.

BURRHEL: Wild sheep in the Himalaya Mountain area.

BURRING, CARBONIZING: This is an optional operation and follows the drying which comes after the scouring process.

Sometimes, too much foreign matter, particularly of a vegetable nature, is found in the wool. Dusting is not a perfect operation. This vegetable matter often causes trouble, if allowed to remain in the stock, as it is being run through the several machine operations. Hence, there is a necessity of removing it from the wool. Two methods are used in carbonizing:

1. By merely re-dusting the stock.

2. By carbonizing the wool. This is a "burring-out" or a reducing to carbon of the vegetable matter contained in the wool. The stock is put into a solution of hydrochloric or sulfuric acid, at a strength of about 3 percent. This strength depends on the quality of the wool being treated. The wool, which is in the bath for several hours, is stirred every now and then. Cement cisterns or lead-lined vats are generally used. Care has to be given to guarding against an increase of the strength of the bath because of the lining of the container in which the wool has been placed. If the bath becomes too strong, the wool is attacked, thereby causing it to disintegrate and become inferior when worked. The wool, on being taken from the scouring bath, is put through the dryer at a strength of about 75 degrees, Centigrade. This causes the vegetable matter to dry up and to be reduced to an ash form. In this condition, the reduced vegetable matter is, after drying, readily shaken out from the wool in the form of dust. Carbonizing is not resorted to, unless absolutely necessary.

BURRY: Burr-infested wool found to some extent in Texas and California wools. Burry wool brings a lower price in the trade.

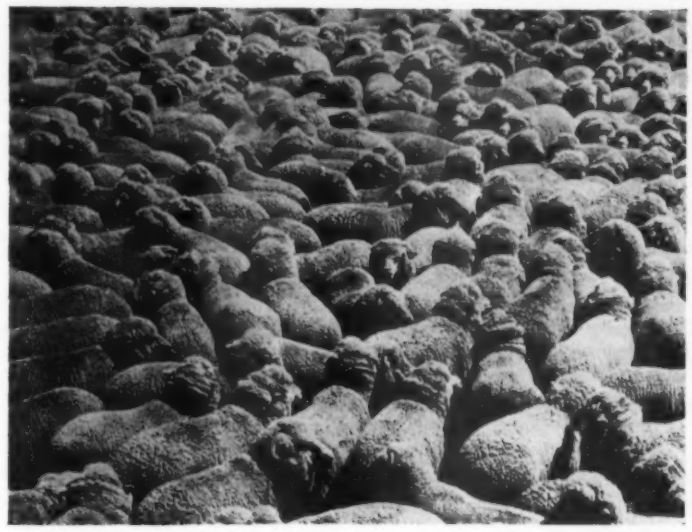
BURRY BLANKET: A plain woven, coarse woolen blanket which has a nap.

BUSHIREH, BUSSORAH: Low-grade carpet wool from Mesopotamia; the fleece is very irregular.

BUTT: Irregular bag or sack of wool found in the Australian wool business which contains 196 pounds of grease wool or 112 pounds of scoured wool with a tare of not less than eleven pounds.

BUTTERNUT: Woolen homespun cloth which was dyed brown with extracts from the butternut tree; popular at the time of the War between the States.

BUTTS: Britch or low quality wool or matted, dungy locks that are of little or no value. Another name for tags.



I.W.S. Photo

CABESA: Name for wool from Estramadura area in Spain.

CACERES: Medium quality Spanish wool.

CACHEMIRE: French for cashmere.

CADET CLOTH: The standard blue, gray, or indigo and white mixture, made of woolen yarn, as decreed by the United States Military Academy at West Point, New York. Other public and private institutions use this or similar cloth. Heavy in weight, durable, rather boardy in feel. Is an excellent outdoor cloth. The material is a double cloth construction. The texture is very compact and fabric is heavily fulled and carefully finished.

CAEN: A French woolen serge.

CALMUC, KALMUCK: 1. Central Asiatic wool obtained from sheep of the wandering tribes in the Khirghiz area.

2. A loosely woven, twilled woolen made from loosely spun yarn. The fabric is heavily fulled and is given a long nap which makes it suitable for winter wear in cold climates.

CAMEL: There are two types of camel: the Dromedary or one-hump type, and the Bactrian or two-humped type. Dromedaries, whose fibers are never used in fine fabrics, are found in Arabia, Egypt, Iran, Senegal, and Syria. Bactrians are native to all parts of Asia from the Arabian Sea to Siberia, and from Turkestan to the Steppes of Tartary, Thibet, Mongolia, and Manchuria to all parts of China. The finest fiber comes from Mongolia.

Three types of hair are obtained from camels:

1. Quality One: The "down-type" of fiber, also known as noil and next to the hide, is short, soft and silken-like in feel. The fibers are beautiful light tan shades; they have good tensile strength and may be used in the natural condition or dyed dark colors. Quality One is used in high grade fabric which comes in tannish colors. The fibers of this quality are from 2½ inches to 3 inches long.

2. Quality Two: Beneath the outer hair of the animal there is a growth which combines the outer hair and the shorter, less coarse portion of the fleece. This grade is used in apparel fabric.

3. Quality Three: The outer hair — coarse, tough, and wiry — possesses cactus-liked tipped ends and ranges in color from brownish-black to reddish brown. The fibers which range from 4 inches to 10 inches in length are used by natives in making blankets, tents, cord and rope.

The camel sheds its hair in clumps and therefore is not shorn or plucked as in the case of other fleece-bearing animals.

CAMEL HAIR SHAWL: A shawl or throw made of camel hair, considered as a luxury article which commands a good price. Today, however, the term seems to have lost its original meaning since it is used somewhat indiscriminately to describe shawls regardless of the amount of camel hair used.

CAMEL SUEDE: A cotton cloth which resembles camel hair fabric; the cotton content in the fabric must be stipulated in accordance with ruling of the Federal Trade Commission.

CAMELOT CLOTH: 1. Coarse fustian used for work clothes in Great Britain.

2. A fabric woven of cotton and wool, having a waved surface.

CAMLET: 1. Originally a costly material made in Asia of camel hair; later made mixed with angora wool.

2. Imitations of hard twist woolen and worsted yarn, with an admixture of silk or goat's hair and made with a satin weave.

3. A stiff, loosely woven, nearly waterproof fabric of camel's hair or some imitation or substitute.

CAMPOS: A Spanish clothing wool.

CANADAS: French woolen blankets.

CANADAS REAL: The hundreds of miles of well-defined "sheep paths" made by Spanish merino sheep who used to roam at will in that country. The Arabs introduced this method of giving sheep a "free reign" there and it seemed to reach its peak in the 13th century, that greatest of centuries except for the present century. Migratory and periodic habits of sheep could be studied by animal husbandry men. The limit of the longest paths was about 400 miles.

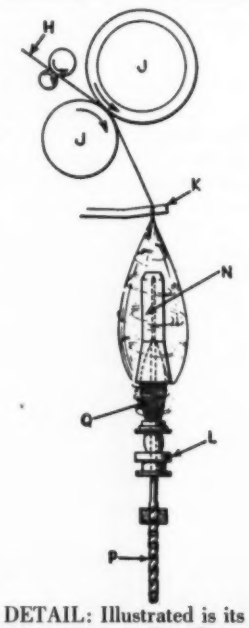
CANDLEWICK: A soft woolen dress material made in imitation of the candlewick bedspread, with tufted patterns similarly applied.

CANICHE: Cloth that has a curly face in imitation of the fur of the French dog, "caniche."

CANOTIER: A French dressgoods made on a two-up and two-down, twill or serge weave. Used for yachting and boating costumes and outfits.

CAP SPINNING: A method of spinning yarn in which the twisting and the winding are done by passing the end under a stationary cap while the bobbin revolves inside of this cap. The cap covers the entire bobbin.

Cap spun yarn is rather wiry, harsh and boardy since long-fiber staple, coarse in nature, is often spun on this method. Cap spinning gives higher production when compared with yarn spun on the ring, mule and flyer systems of spinning worsted yarn. It is much resorted to in spinning on the Bradford or English system; medium and below-medium fabrics are made from the yarn.



CAP SPINNING IN DETAIL: Illustrated is its difference from mule spinning. Actions are continuous. Spindles revolve on stationary frames. Roving (H) fed continuously from feed rollers (J) through fixed center eyelets (K) is whirled into yarn by revolving spindles (L) which whip it around the cap (N), producing the required twist.

Caps (N) on innershafts (P), moving up and down, control winding of yarn on bobins (Q). — Nat'l Ass'n of Wool Mfrs.

CAPE WOOLS: General name given to wool obtained in Natal, Orange River Colony, Transvaal, Rhodesia and Cape Colony, the states which comprise the Union of South Africa. These high quality fleeces are in great favor in this country because of their excellent working properties during manipulation; they are much sought for use in the heavier woolens materials.

CAPPA MAGNA: Used by bishops, canons and cardinals. This long vestment is lined with silk or fur and is usually red or purple in color. The fur is either white or deep brown. It is used for assistance at Divine Office and at Mass for a prelate who is not celebrating.

CAPUCHIN CLOTH: The coarse brown cloth worn by the monks of the Capuchin Order of the Roman Catholic Church. The garment consists of habit and a cape or cowl. Wool, mohair and other hair fibers are used in making material which varies in weight in accordance with seasons.

CARACUL: A short, curly haired fur distinguished by its flat, open wavy curl. Chinese caracul is larger and lighter in weight than Russian caracul, which is naturally brown, black, and occasionally, white. Wearing qualities, good. Judged by luster of fur and pattern. Found in Russia and China. Worn for dress. Indian lamb, also in the caracul group, comes in white, black or gray — now being dyed in honey beige and brown.

CARACUL CLOTH: Heavy woolen fabric woven to resemble Persian lamb. Used for women's and children's coats, capes, muffs, etc. Named for the Persian lambs found in Russia.

CARACULE: A smooth cloth that features, at certain places, knots which are made of mohair, to simulate genuine fur caracul.

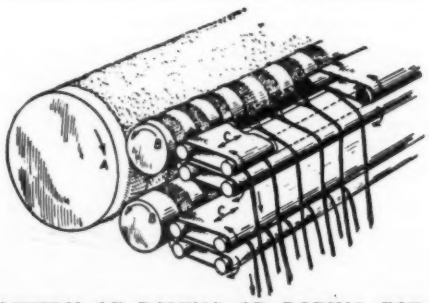
CARBONIZING: Manufacturing process to free raw wool of burrs or vegetable matter. Done by using chemicals and heat. When wool is dry the carbonized matter "dusts off." A process also used on reused wool.

CARBONIZING, FELT: The immersion of semi-processed felt in a weak solution of sulphuric acid to oxidize any vegetable matter present that might tend to retard the felting process.

CARD CLOTHING: Special cloth or rubber studded with wire teeth which serve to open up textile fibers, clean them of some of the impurity and arrange these fibers in parallel order. The fillet of the clothing is made of linen and cotton fabric.

CARD CLOTHING, TYPES OF:

1. KNEE: The bent wire teeth set in a foundation fabric which is wound around rollers on a carding machine.
2. METALLIC: The narrow serrated metallic flutes which are spirally arranged and cover the entire surface of a roller.
3. STRAIGHT: Wire teeth set in a foundation fabric which is wound around a roller.



CARD DELIVERY OF ROVING OR ROPING FOR WOOLEN YARN: The wool fibers lie on the large roller (A) in weblike form. The two smaller rollers (B) lift these fibers in ribbon like sections by their alternate strips of wire clothing and pass them on to the rub aprons (C). These aprons, by a sidewise motion impart a mock twist and condense the "ribbons" into round strands of roping.

CARD DOFFING: Stripping the sliver from the carding machine.

CARD GRINDING: The periodic sharpening of the pressed-steel card clothing wires which serve as the covering for the various rollers found on a carding machine. An abrasive cylinder does the grinding.

CARDIGAN: 1. A form of the rib knitting stitch, modified by tucking on one or both sets of needles. For half cardigan, tuck on one set, for full cardigan, tuck on both sets of needles. Tucking thickens the fabric.

2. Also a sweater style usually referring to a 3-button coat sweater with either a V or round neck. There are also cardigan jackets made of a woolen or worsted fabric.

CARDINAL CLOTH: Ecclesiastical cloth made from merino wool and given great care in finishing. This red woolen material is worn by the cardinals of the Roman Catholic Church.

CARDING: The process in yarn manufacture in which the fibers are brushed up, made more or less parallel, have considerable portions of foreign matter removed and are put into a manageable form known as sliver. This approximates the size of a man's thumb in diameter.

Carding is done by means of rollers or flats that are clothed with fine, cylindrical, pressed steel wire called card clothing.

CARDING, SPINNING AND WEAVING, DEVELOPMENT OF: The four eras of this development follow:

1. THE FAMILY SYSTEM (to about 1100 A.D.).

Under this system, carding, spinning, and weaving were carried on by members of the household for the purpose of supplying the family with clothing. This was before the days of sales, prices, cut-prices, and bargains. Each class of society, from the humblest peasant to the nobleman or blue-blood, had its own devices and methods of making textiles and clothing. This system was totally for home consumption.

2. THE GUILD SYSTEM (from 1100 to about 1750).

As the world progressed and as communities became larger, and cities came into being, the textile industry became a larger business than for the family alone. Better textures and fabrics were in demand. To meet this demand, it was necessary to have looms and the improved parts for these looms. The small weaver, who owned and constructed his own looms, was not able to own all of the necessary parts. Hence, he had to turn to a more prosperous weaver for his livelihood. The same applied to carding and spinning. These two phases of the industry became separated from weaving. In time, they also separated.

The Guild-System caused the small weaver to be driven out by the growth of organized labor and capital, particularly by the latter. Under this system, the industry was carried on by a small number of men called Masters. They employed two or more men, who were called Journeymen or Apprentices. These masters organized the guilds on a systematic basis and controlled the manufacturing phases to a greater extent than is possible today.

3. THE DOMESTIC SYSTEM (from about 1750 to 1800).

By the middle of the Eighteenth Century the separation of carding, spinning, weaving, and other branches of the textile industry was an accomplished fact. The rural communities increased in textile work. When the rural districts took up textiles, the Guild System and the Masters began to decline in the power once wielded. While the work was still carried on in the master's house or shed, he now began to receive his raw material from the merchant, and disposed of the finished goods to a middleman who looked after the demands of the various markets. The economic laws of supply and demand, production, distribution and consumption were at hand. Raw material took its place with other factors.

4. THE FACTORY SYSTEM (from about 1800 to Present Time).

Necessity is the mother of invention, and as time went on, the factory system just had to come. The factory is a place where goods are produced, by power, for commercial purposes and use. Following the invention of the steam engine, the factory system was an actuality. No record has been found that shows that this system was in vogue prior to this invention.

English, Irish, Scotch, and Welsh spinners and weavers became very skillful, and with the many English inventions of this incipient stage in the Factory System, the production of yarn and cloth increased. By the mechanical arts, one man could do the work that formerly took ten, twenty, or more men to do. Water and steam power replaced manual labor. This caused large scale production by combining capital and machinery. This resulted in what is now the Factory System — the product of the Industrial Revolution.

Prior to the Factory System, there was no reason why any industry should be centered in one particular district. With the Industrial Revolution an accomplished fact, greater sub-division of the textile industry was necessary. Each unit became, to a greater or lesser degree, localized. Geographical and raw material factors had to be considered. Suitable areas of a country had to be taken over for this or that phase of the industry to which it would be best suited.

Old time textile areas that are still great were established because of water power, rivers, accessibility to markets, and natural positive factors.

CARMELINE: A medium grade of vicuna wool used in France.

CARMELITE CLOTH: Named in honor of the Carmelite Order of the Roman Catholic Church. Plain weave, low texture, woolen cloth that is given considerable fulling. Somewhat resembles woolen bunting. Used as garb.

CAROLINE: French serge made on eight ends and eight picks to the repeat.

CARPET BAG: Reminiscent of Civil War days, this carry-all type of bag was actually made of carpet strips.

CARPET BINDING: Narrow tape made of wool or cotton used to bind the edges of all types of floor coverings.

CARPET BINDING YARN: Weft yarn carried across the loom by a shuttle (in Axminster by a needle thrust) alternating with the filling yarn, usually cotton or jute.

CARPET CHAIN WARP: Two cotton yarns running warpwise of fabric and drawn by heddles alternately over and under the weft binding and filling yarns as they are inserted by shuttles in Tapestry, Velvet, Wilton, and Chenille weaves, and by a needle thrust in Axminster.

CARPET FILLING YARN: Weft yarn carried across most looms by a shuttle (Axminster by a needle thrust) alternating with the binding weft yarn. It is usually cotton or jute.

CARPET LOOM FRAMES: Trays or creels holding spools of surface yarn in two to six levels back of the Wilton loom. One strand of yarn is lifted into position by the Jacquard mechanism to form the design on the pile surface while the other yarns, one to five in number, are woven dormant in the warp direction.

CARPET PICK: Refers to the filling yarn in making carpets and it is determined from the number of reed spaces in the loom and may denote the total number of loops or tufts in a standard 27 inch carpeting.

A pitch of 256 signifies 256 reed splits or about 9½ ends per inch. One loop of pile is often denoted as a point, and the number of points per square inch is equal to the number of wires times the pitch.

The number of filling picks considered in reference to the pile tufts or loops is called the shot. Thus, a two-shot carpet is one that has two filling picks or yarns to each row of pile loops; a three shot carpet would have three filling yarns to each row of pile tufts and so on.

Pick is also applied to the filling yarns thrown through the shed of the loom in a crosswise direction between the warp ends. The number of picks per inch indicates the compactness of the weave texture. Fine quality Wilton will have three shots times 13 wires or a total of 39 picks.

CARPET PITCH: The number of warp yarns per inch crosswise on the loom. It is usually stated in relation to a 27-inch width or ¾ width. Standard pitch for Wilton carpet is 256, Axminster, 189.

CARPET STRETCHER: A device for stretching carpets tightly. Several kinds are in use, one of which consists of several sharp teeth attached to a knee pad. The worker sticks the teeth into the carpet and pushes on the pad with his knee to draw the carpet tightly against the floor.

CARPET THREAD: A very tough, durable, waxed, ply thread used in the carpet trade in carpet-binding work and for sewing seams.

CARPET WOOL: Any wool that cannot be classed as carding, clothing or combing wool. It is the poorest of the four major types of wool. It cannot be combed and is often difficult to card. The wool is much used in carpets, rugs, cheap boys' clothing, mackinac and windbreaker fabrics, and in low-priced apparel for adults. Most carpet wool used here is imported because the manufacturers in this country have caused the wool growers to elevate domestic carpet wool to the point where most of it, because of scientific cross-breeding, is now used in making fabric for the apparel trades.

Some popular foreign carpet wools much used here include Aleppo, Awassi Karadi, Buenos Aires, Cordova, Joria, Kandahar, Scotch Blackface, the most popular carpet wool used in this country in the carpet trade, Tibet, and Vicaneer. These wools may have a price range from about forty-five cents a pound up to sixty cents a pound.

CARROT: To brush furs with a solution of mercury and nitric acid. The treatment opens the sheaths surrounding each fur fiber and permits the matting or felting of the fibers in subsequent operations.

CARROTING MACHINE: A machine for carroting fur to prepare the fibers for felting. The machine consists of a storage tank, a power-rotated brush, and a table. The skins are pulled across the table beneath the brush, moistened with solution that drips from the storage tank faucet, moistening and working the fur fibers.

CARR'S MELTON: The fine, high grade meltons made by Carr, Son and Company, of London; the acme of perfection in this face-finished fabric.

CARTRIGHT, EDMUND: In 1789, he applied power of the Watts and Bolton Steam Engine to the machines of Arkwright. He invented the power loom and the combing-machine — two of the greatest contributions to the textile industry. Incidentally he was a great friend of Robert Fulton and gave the latter many valuable ideas for his steamboat.

CASHMERE: 1. The finest cashmere goat is raised in Thibet, the Kashmir province in northern India, Iran, Iraq, and southwest China. Cashmere is more like wool than any other fiber. The hair is very cylindrical, soft, strong and silken-like. True cashmere, which is brownish in color, ranges from 1¼ to 3½ inches in length. The long coarse outer fibers are from 3½ to 4½ inches long. The fiber diameter is about 1/1600 inches.

2. The cloth was first made from the downy hair of goats of the Vale of Cashmere. Indian commercial cashmere cloths are found in overcoatings, suitings and vestings. Cloth is made of fine wool that may be mixed with hair fibers. Soft finish is noted in the fabric. In all-hair fiber cloth, the material is made into the famous, well-known, highly desirable Indian shawls.

CASHMERE TWILL: A three-shaft filling effect twill; 1-up and 2-down.

CASKET CLOTH: Also known as undertaker's and coffin cloth. A thin, lustrous, cheaply made material of wool, wool wastes, wool and cotton, rayon and rayon acetate. Its use is implied by the term.

CASSIMERE: Suiting and trousering material of various compact weaves and color effects. Popular, staple cloth. Hard twisted yarn is employed. Often made with worsted warp and woolen filling. Can be made of a cotton warp with worsted or woolen filling. Cassimere is rather lustrous, harsh in feel, and light or medium in weight. Shines with wear. May be classed as a low grade serge.

CASSIMERE TWILL: Another name for a 2-up and 2-down twill weave. In other words, it is an even-sided, four-harness twill construction.

CASSIMERETTE: A cheap grade of cassimere suiting.

CASSINETTA, CASSINETTE: A cotton warp and wool or worsted filling cloth made to simulate cassimere worsted used for men's suiting. Made in lighter weight than cassimere, it is used as a dressgoods fabric.

CAST: A coarse, irregular, low quality wool fleece.

CASTALOGNE: A fine woolen blanket made in France and Spain.

CAT HAIR: It comes in many colors and has good luster; it is from 1 cm. to 2 cm. in length. The hair is used as "filler-in" fiber in some dress goods.

CAVALRY TWILL: A strong, rugged cloth made with a pronounced raised cord on a 63-degree twill weave. Woolen or worsted yarn is used. The weaves used for cavalry twill and elastique are the same and there is no set weave for either fabric. The weave may vary according to the size of the yarn used and the fabric weight per yard. Cavalry twill is the original name; elastique is a United States government term used very likely because of the different texture of the alternating picks which give the fabric more elasticity and properties and characteristics resembling knitted fabric. Cavalry twill has the coarser rib effect when compared with elastique, which has a smoother effect and feel. The cloth is also made in spun rayon. Used for riding habits, ski wear, sportswear, uniform fabric.

CHAIN BREAK EFFECT IN CLOTH: Also referred to as woven overplaid, filling-break, and weave-break-in-filling; a very broad term. The effect is sometimes observed on clear finish worsteds. It is controlled by the "breaks" made in the weave-chain on the loom when the cloth is being woven. These box-effect breaks are made purposely to add to the effectiveness of the design. They are clearly seen in the cloth pattern on examination. J. E. Sohnne, a textile manufacturer of Burtscheld, Prussia, is supposed to have originated this type of design to the trade. Also known as woven overplaid, filling-break, and weave-break in filling.

CHALINET: Another name for challis.

CHALLIS: Soft, lightweight woolen cloth made of plain weave. Is of medium construction. May be dyed or printed. Used for women's and children's dressgoods, comforters, counterpanes, Kimono cloth, robes and spreads. The cloth is inexpensive. Originated in England about 1830. The fabric is made in cottons and from hair fiber yarn. One of the most popular types of this material made from silk warp and worsted filling.

Challis is also a spun rayon fabric made with plain weave. Printed to simulate woolen or worsted challis. Durable, launders well and drapes in satisfactory manner.

CHALYS: Synonymous with challis.

CHAMBERY: French dressgoods made from silk or rayon warp and worsted filling in a small twill weave effect.

CHAMBORD: Woolen mourning cloth that may contain cotton, rayon or silk fibers. The cloth has a ribbed appearance and the size of the ribs vary in diameter.

CHARKAS: The hand spinning wheel of India; it is estimated that 50 million of these wheels are used there today.

CHARMEEN: A very high quality, compact texture worsted dressgoods cloth used in women's wear. Dyed in all colors, this distinctive twill weave fabric is used for conventional, tailored ensembles. Charmeen resembles French serge to a marked degree.

CHECK: A small pattern woven in or printed onto a cloth. Glen checks, gun-club checks, hound's tooth, shepherd's check are examples.

CHECKS, HOMESPUNS AND TWEEDS, STANDARD SCOTCH: The National Association of Scottish Woolen Manufacturers, Edinburgh, Scotland, gives the following list of standard checks, homespuns and tweeds:

Wool Check Cloth in Final Pressing Operation — I.W.S. photo.

Ardtornish	Carnegie	Glenmorriston	Minmore
Arndilly	Carnousie	Gordon Highlanders	Minto
Ballindalloch	Dacre	Hay or Dupplin	Pitgaveny
Balmoral	Dalhousie	Invercauld	Poltalloch
Brooke	Erchless	Invermark	Seaforth
Bateson	Fannich	Kinlochewe	Strathspey
Black Watch	Glengarry	King's Own	Strathmashin
Benmore	Glenfeshie	Lochmore	The Kintail
Corgach	Glenurquhart	Mar	Wyvis
			Welsh Guards

CHEETHAM, DAVID: The inventor of the coiler can attachment which receives finished sliver from the calender rollers of the carding machine.

CHENILLE: A cotton, wool, silk, or rayon yarn which has a pile protruding all around at right angles; simulates a caterpillar. Chenille is the French word for caterpillar. The yarn is used as filling for fancies, curtains and carpets, embroidery and fringes. It is woven in gauze weave with cotton or linen warp and silk, wool, rayon or cotton filling. The warp threads are taped in groups and the filling is beaten in very compactly. After weaving the fabric is then cut between the bunches of warps, and the latter twisted, thereby formed the chenille effect. Chenille carpeting is rather expensive and luxuriant.

CHENILLE AXMINSTER: A cut-pile carpet, made by binding printed chenille yarn from side to side, to the foundation.

CHESTERFIELD: 1. Named for Philip Dormer Stanhope, the fourth Earl of Chesterfield, the coat was single-breasted with a fly front and plain back which had a center seam, notched lapel and a velvet collar. This 18th-century popular coating is now made in all colors and is used for overcoating adapted into tailored coatings for women's wear. The term also refers to a four-button, cut-away coat in which the top button only is used for fastening purposes.

2. A single-breasted, fly-front overcoat of medium length, having a plain back with or without a center seam.

3. A single-breasted cutaway frock coat for stout men, usually made with four buttons, the top one only used.

CHEVIOT: Rough woolen suiting and overcoating cloth. Similar to tweed in construction. Name is derived from the fact that hardy wool from the Cheviot Hills of Scotland is used in making the cloth.

Today the cloth is made from a plain or a twill weave. Many other cloths use Cheviot wool but are not classed as Cheviot cloth. True Cheviot is very rugged, harsh, uneven in yarn, does not hold the crease and sags with wear. It is a good "knock-about" cloth and ideal for sports wear. May be piece or stock dyed and has the tendency to shine with wear. In quality, material ranges from low to high, and it is made on hand or power looms.

CHEVIOT BRITCH: Classed by itself, in contrast to britch wool from other luster wools — Lincoln, Leicester, Cotswold, and Romney Marsh.

CHEVIOT FINISH : A popular finish that has come into its own in recent years. Shetland finish is on the order of a cheviot, but it is softer and better in quality of wool used. The cloth is called Shetland. There are many cloths that seem to be on the border line between cheviot and shetland and, at times, the names are interchangeable and used indiscriminately.

Cheviot finish is on the order of the undressed type of finish. Grades of the fabric vary because of the several types of basic stock used: Cheviot, Lincoln, Leicester, Cotswold or Romney Marsh wool.

CHEVIOT SHEEP: A medium wool obtained from hardy sheep able to withstand rigorous climate. Originating in the Cheviot Hills of Scotland and grown for centuries there, as well as in Northumberland, England, the staple length is about 4 inches and the fleece weighs from 6 to 8 pounds. Cheviot are much used in cross-breeding in the British Isles, with Border Leicester or Lincoln sheep for market lambs. Shrinkage is about 35 percent.

CHEVIOT, TWEED AND HOMESPUN CLOTHS: Strictly speaking, original tweed cloth showed warp and filling, stock dyed and of the same color. There is a wide range of color used in all three cloths. While a homespun should be made with a plain weave and a cheviot with a twill weave, there is much confusion as to just what is a homespun and what is a tweed, in the trade today. Homespuns are sold for cheviots and vice versa. In the mill, however, a plain weave cloth of the usual characteristics is called a homespun, and a twill weave cloth would signify cheviot or tweed.

Homespun, as a tweed, is the heaviest tweed in weight per yard. It has the salient features noted in genuine tweed. In the trade today, the belief seems to be that homespun is very coarse, rather irregular and of low texture. The lighter cloths in this group are called tweeds.

The center of this cloth industry, in the olden days, was along the banks of the Tweed River which separates Scotland from England. Prior to the Industrial Revolution the material, from raw stock to finished cloth, was made in the home — shearing of the sheep, sorting, mixing, carding, spinning of yarn, dyeing and weaving. From about 1750 the factory system began to replace the home system. The result was that most of the cloth was now made on power looms that were coming into use.

Despite the great rise of power-loomed cloths, handwoven cheviots, tweeds and homespuns are still in good demand. They bring a good price. Incidentally, there is a good psychology in advertising home-made materials and articles. The better type store features this end of the trade very much. Hence the reason as to why the old, home industry still carries on and is flourishing in some of the more remote sections of the world.

CHEVRON: Another name for herringbone, as well as for a French serge which is made on eight ends and four picks in a small broken twill effect. The design resembles the army chevron. The cloth is used in woolen and worsted suiting and topcoating.

CHIFFON BATISTE: The name for sheer batiste made of wool or worsted yarn. Used as dressgoods, this cloth comes in colors, black and white.

CHIFFON VELVET: Similar to woolen broadcloth but is lighter in weight, ranging from seven to ten ounces per yard. Broadcloth will run from ten to sixteen ounces or slightly more, per yard. Chiffon velvet has a smooth feel, excellent finish and is one of the better quality cloths in demand.

Another type of this fabric is made of silk or rayon in a clear-pile material which comes in many qualities. The better grades are quite expensive. Drapes well, is durable, dry cleans, and has tendency to crush. Used in evening wear and wraps.

CHINA BALL: Northern Chinese wool is combed or pulled from the sheep's back and rolled into balls.

CHINCHILLA: The name of a rodent whose fur is mixed with other textile fibers in making cloth of high quality. The cloth of today does not resemble the pelt of the animal. The knotted face, modern overcoating takes its name from the town of Chinchilla, Spain. The present-day type of chinchilla cloth was first made here. The product is made into coatings, uniform cloth and livery wear.

Chinchilla is made in double and triple construction. Cotton warp yarn is used because of the property of twist that it has. This is essential because of the construction of the material. The cotton warp does not show on the face or back of the cloth, and adds to the wearing quality. The nubs found on the face of the material are made by the Chinchilla machine. It attacks the face of the cloth, and causes the long floats used in the construction to be worked into nubs or minute balls. The length of the floats is usually five or seven. Chinchilla is a pile cloth and may be piece, stock or skein dyed. Weaves, other than the filling to be floated, are usually satins. They aid in bringing about the best possible appearance of the cloth. The fabric is one of the "cycle group" and comes into prominence about every seven or eleven years and for a year or so is a genuine leader in the trade.

CHLORINATED WOOL: Chemically treated woolens whereby shrinkage is decreased and dyeing properties increased, especially in the case of fabrics that are to be printed.

CHUDDER, CHADDAR, CHADAR, SHUDDAR: 1. Arabian cotton cloth made of plain weave featured by wide blue or black stripes in the warp direction. Narrow filling stripes of white appear in a sequence of four bars at the ends of the material which is made 100 inches long and about 40 inches wide.

2. Hindoo language term applied to brilliant bright green color observed in billiard cloth, a very high grade and expensive fabric.

3. East Indian shawl fabric made of goat's hair or wool; it has woven figures on a solid background.

4. East African term for semi-bleached cotton cloths made in India; used as loincloth.

CLAN PLAID: Any Scotch plaid in the true colors of some particular Scotch clan such as Cameron, Campbell, MacPhee, MacDonald, etc.

CLARTE: French for the clear surface finish on a cloth.

CLAY, CLAY DIAGONAL, CLAY SERGE, CLAY WORSTED: A staple worsted made on a 3-up and 3-down, right hand twill, a weave made popular by J. T. Clay, a leading textile manufacturer in Rastrick, Yorkshire, England.

The cloth has a low texture, is piece dyed, and runs from 12 to 18 ounces per yard in weight. The fabric, which has a harsh, boardy feel, gives good service which is enhanced by the rather shaggy finish applied. The yarn is beardy in feel and appearance, and is given good, hard twist.

CLEAN BASIS: The price of scoured wool minus loss and charges incurred in the scouring operation.

CLEANING AND SCOURING: Applied to woolens and worsteds, these two operations may be more or less combined. The purpose of the operations is to rid the material of all oil that was added to the stock in blending, oiling, and mixing operations, as well as stains, dirt marks, and other unclean areas which are frequently seen in cloth. They are difficult to avoid because of the great number of operations that wool undergoes from raw stock condition to the gray goods state. The handling of the goods by many operatives is also the cause of many stains.

Sizing is also taken out if any has been applied to the yarn in the warping operation, in order to aid the warp yarn in weaving.

The cut of cloth, having been placed in the fulling mill or machine, has had its ends sewed or tacked together, after being run through two large eyelets in the machine. This is done so that perhaps a 60-yard cut of cloth could be made endless and cut down to one-half the original length dimension — a cut of cloth that is now endless with two 30-yard circumferences.

The fulling mill bath is made up of hot water and soap and there may be some other ingredients added. This bath causes the cloth, when it is fed into the milling liquor, to become very wet. The length of time the cloth is in the mill varies from one-half hour to several hours, dependent on the cloth in question. Scouring, rubbing, friction and pounding cause the felting and shrinking-in.

CLEAR FINISH: Cloth in the woolen and worsted trade finished so that no nap or fuzz remains on the face of the goods. All protruding fibers have been removed because of the operations that the cloth is subjected to in finishing; the warp and filling are plainly seen. This finish is given to fabrics where the weave is an outstanding characteristic. Clear finish fabrics have the tendency to shine with wear but hold the crease very well.

Examples are cassimere, charmeen, covert, diagonal worsted, gabardine, serge, poiret, tricotine, elastique, twill cloth, twillcord, whipcord.

CLEAR NOIL: Wool or worsted noil devoid of all vegetable matter.

CLIP: 1. Wool taken from sheep after one season's growth.

2. To cut with shears or scissors in order to separate material or to relieve tension.

CLIPPINGS: 1. Waste materials from tailors' clippings to house-clippings. They usually find their way to a shoddy mill and are ultimately used in making manipulated cloth from fibers obtained from discarded apparel.

2. Also known as Peddler's Wool, it is the poorest quality fiber taken from a sheep fleece.

CLOTH BOLT: The length of the woven cloth as it comes from the loom, or the length of the material as used in the trade. Woolens and worsteds are finished at the following lengths — 55, 60, 72, 80, 85, 90 or 100 yards, the firms usually specifying the length in cutting-up of the goods.

Cottons are usually finished at lengths of 40 and 45 yards.

Silks and rayons are finished at about 40 yards in length.

CLOTH, POSSIBLE DEFECTS IN: The following will show the number of possible defects that may be found in woven goods:

1. Barry or barre marks.
2. Bleeding colors.
3. Broken pattern.
4. Broken ends or picks.
5. Cloudy goods.
6. Cockled cloth.
7. Coarse ends or picks.
8. Creases.
9. Crocking.
10. Cut listing or selvage.
11. Dead colors.
12. Double picks.
13. Ends out.
14. Floats.
15. Hair in filling-fuzziness.
16. Harness skips.

17. Hitch backs.
18. Holes.
19. Kinks.
20. Loose picks.
21. Loose selvages.
22. Mispicks.
23. Mixed filling.
24. Narrow width.
25. Oil stains.
26. Overwidth.
27. Reed marks.
28. Rolling selvage.
29. Section marks.
30. Shear marks.
31. Shiners.
32. Skipping.
33. Shuttle marks.
34. Slugs.
35. Specky goods.
36. Sluff offs.
37. Sand roller marks.
38. Start-up marks.
39. Thick stripes.
40. Thin stripes.
41. Tender goods.
42. Tight picks.
43. Pight selvages.
44. Torn selvages.
45. Uneven cloth.
46. Washer wrinkles.
47. Weaving over or under.
48. Weaving slack.
49. Wrong draws.
50. Uneven double and twist.

"CLOTH FINISHING": Term used in woolen and worsted finishing which implies that the cloth can be brought back to its natural or desired finish as it was prior to sponging.

CLOTH, MACHINE PINKING OF: This is done by a pinking machine which cuts swatches of cloth for the trade. The feature of the machine is that it gives a wavy or scalloped edge to the goods to prevent ravelling of the edges. Pinking may also be done by hand pinking shears.

CLOTH, THE PARTS OF A PIECE OF:

1. FIBER: The smallest unit in a woven, knitted, braided or felt material. Fibers are also used to make felt material.
2. FILAMENT: A long fiber that may be indefinite in length.
3. YARN: This is made up of twisted fibers or filaments and can have considerable strength and length.
4. PLY YARN: Two or more yarns that are twisted or plied together.
5. CLOTH: This is made from yarn in three ways:
   A. Woven cloth is made from two systems of yarn or thread which interlace at right angles to each other; serge, homespun, damask.
   B. Knitted cloth is made from one system of thread or yarn which interloops, a loop within a loop; hosiery, jersey, sweater fabric.
   C. Braided or plaited material is made from an interlacing of one yarn only. The yarn may be made to interlace at any angle; lace, veiling, shoe lace.

   Felt is not made from yarn; it is made from a mass of fibers that are interlocked and made into a material by means of heat, pressure, moisture, pounding and rolling, hot water, etc.
6. THREAD: It is used in sewing materials and is a ply yarn of some special nature. This ply thread is given a high number of turns of twist per inch. It is often waxed, coated or treated in some way for a particular use in order to work smoothly and well. Ply yarn, such as automobile tire fabric, may have a ply of 9, 10 or 11.

CLOUDY GOODS: Material that is off-shade because of uneven, faulty dyeing. The cloth has a clouded or mottled appearance when the light's rays strike it. Poor penetration of dyestuff, specks, streaks and cakiness cause cloudiness.

CLOVE: British term for measuring wool — 7.7 pounds to the clove.

COARSE ENDS: Ends that are too irregular in diameter or have too much foreign matter in them to make a smooth, uniform yarn.

COARSE PICKS: Picks that are faulty and show up to poor advantage in the body of the cloth.

COBBLERS: Poorly dyed bolts of cloths which are returned to the dyer before the material is dried.

COBURG or COBOURG: A lining and dressgoods material made from a two up and one down right hand twill. Warp is cotton, filling is worsted. May be piece dyed or printed.

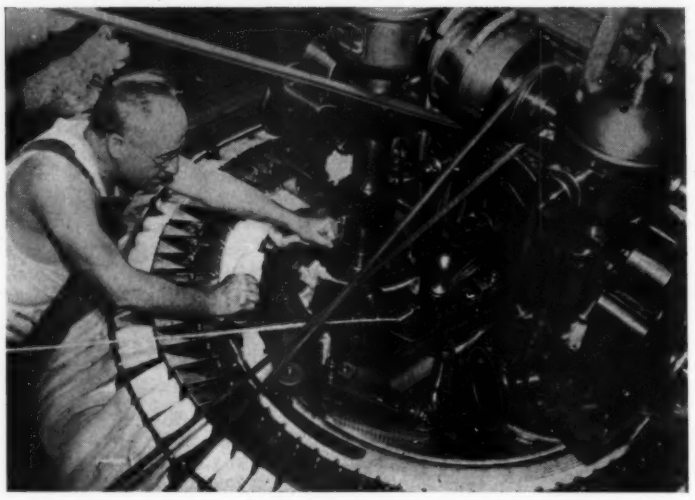
COCKLE, COCKEL: From French "Coquelle," meaning cockle shell. Name is given to a distorted or shriveled effect on fancy clothes. This is result of uneven scouring and fulling in finishing. Cockling may also be caused by improper tension on yarn in weaving, or lack of uniform quality in the raw material used. Several novel ideas have been advanced for the correction of this detriment to cloth.

COILER: The arrangement by which card sliver is coiled into the coiler can, after the sliver has been taken from the calender rollers and led through the trumpet, which is located at the top of the coiler arrangement.

COLORED LISTING: Fabric woven with colored selvage ends to distinguish it from the body of the cloth. Some firms weave their fabric with colored selvages for identification or trade mark purposes.

COLUMELLA, LUCIUS JUNIUS: His book, "De Re Rustica," is the best book on sheep from antiquity and many of its principles, methods and suggestions are still used wherever sheep are raised. Columella was a Roman who lived in Cadiz, Spain. His estates were in and near Cordoba.

In 50 A.D., during the reign of Claudius, he crossed Tarentine rams with native Italian and Spanish ewes. He understood cross-breeding. When he cross-bred North African rams with native ewes he laid the foundation for the present Spanish Merino breed of sheep knowl all over the world.



COMBING: An advanced form of carding. Combing separates the long, choice, desirable fibers of the same length from the short, immature, undesirable stock that is called noil. Combing practically removes all remaining foreign matter from the fiber stock. Only the better grades of cotton, wool and other major fibers may be combed. Combed yarns are always superior to carded yarns.

COMBING, DRY: The combing of worsted fibers in which no oil or emulsion treatment was given to facilitate the movement of the fibers in manipulation.

"COMBED-WORSTED" KNITTING YARN: It is made of good stock, uniform in all respects, with fibers of the same length; all undesirable fibers have been removed from the yarn in processing the wool. The yarn is used chiefly in knitted hosiery and underwear for use in cold weather.

COMBINGS: A term used in wool sorting which shows the number or grade location of the wool on the sheep fleece, the quality and the grades to which the fibers may be spun in the worsted system of spinning, which uses the standard of 560 yards of yarn in one pound of a number-one worsted yarn:

Number	*From*	*Fleece*	*Grades or Count*
First	Sides and shoulders	Fine	66s to 70s
Second	Back and across the loins to the neck	Fine medium	64s to 66s
Third	Sides and shoulders	Medium average	60s to 64s
Fourth	Sides and shoulders	Average strong	58s
Fifth	Sides	Strong	56s
Sixth	Lower part of thigh, belly, rump, shanks	Poor	Low counts of warp or filling yarn

COMBING INVENTIONS: Despite the fact that Edmund Cartwright invented the first combing machine in 1789, it was forty years later before the machine had genuine value. Other inventors of combing machines were: Heilmann, Donisthorpe, Lister, Noble and Holden. The most important of this group was Joseph Heilmann, an Alsatian. Watching his daughters comb their hair gave him the idea of his machine. He saw them draw out their hair full length between their fingers — a "separation of the top from the noil" in worsted parlance. Heilmann, in 1830, perfected his machine, which was based on the nip idea of combing. This is important in German, French and Belgian systems of combing today. The use of high grade wool to be used for worsted purposes on his machine did away with more than an average amount of noil and other waste, to obtain more top fibers. Heilmann's machine is of the upright type.

COMBING METHODS: Long, medium and short combing wools are found in the market. They are manipulated in the following manner:

1. LONG WOOL is combed on the Lister or Square Knit comber. This takes care of wool used for worsted stock, ranging from 8 to 12 inches in staple length.

2. MEDIUM WOOL is combed on the Noble or Circular comber. The length of stock combed this way ranges from 2 to 5 inches, and a little longer.

3. SHORT WOOL uses the upright French or Heilmann comber. The comb may be single or double nipped. The best combing is done on this machine, as it cares for stock that ranges from 1½ to 6 inches in length. This type of wool is superior to all other length wool. Much of it is called Baby Combing wool and it is used for the best of worsteds.

COMBING WOOL: The fibers of wool from 1½ to 6 inches long used in worsted yarn. The stock is more desirable and more expensive than Clothing wool. Combing wool fibers are of the same approximate length, whereas in clothing wool they are of variable length and usually shorter than combing wool fibers. Combing wool has the more parallel fibers, less foreign matter, greater serrations, and in every other respect is superior to clothing wool. Combing wool, when it is a finished worsted yarn, goes into a higher type and more expensive piece of material than does clothing wool.

COMEBACK: One interpretation refers to wool which shows a greater staple length than was expected.

The other meaning implies the increased staple length as the result of careful cross-breeding of sheep. Hence, the effort made to increase fiber length is the chief reason why there is so much cross-breeding in the sheep world today, since the fiber quality is also improved.

The theory of comeback is that a ¾-blood ram, crossed with a ⅜-blood ewe, will give an approximate half-blood stock; thus, the ⅜ stock has been improved and the fiber length increased.

A remarkable result of cross-breeding in this country is shown in the rapidly decreasing amounts of carpet wool grown here. This is the poorest of the four types of wool, combing, clothing and carding wools being the others. By the improved scientific methods of raising wool, the carpet stocks have been so improved that they have graduated into the clothing and carding classes. With this decline of carpet wool, it is necessary to import this low grade fiber in increasing amounts from other wool centers.

COMMISSION WEAVER: The owner of a small mill, generally, who weaves material on a commission basis. The commission weaver rarely buys the raw stock on his own account for weaving or other purposes.

CONE: 1. The bobbin upon which yarn is wound prior to weaving.

2. A package of yarn wound into a suitable or convenient shape.

3. A tapered cylinder of cardboard, metal or wood around which yarn is wound.

CONE WINDING: Winding yarn or stock from skeins to paper cones.

CONNAUGHT YARN: A loosely twisted, fine woolen yarn of Ireland.

CO-OPERATIVE WOOL MARKETING: A method used in about ten major wool growing states in this country whereby the growers associate to sell their wool co-operatively through a single agency. Most of these local marketing associations are, in turn, members of the National Wool Marketing Corporation, Boston, Mass., to which they consign their wool for sale. Upon receipt of the wool, the corporation advances money on account and the local organization, in turn, distributes these partial payments to its member growers. Incidentally, Boston is the major wool port and center of activity in wool dealings.

U.S.D.A. Photo by Knell

CONTRACTING: Applied to the practice of selling wool prior to its being shorn from the sheep — on the sheep's back. This method of wool marketing is of more importance and broader usage when the demand for wool is strong.

CONVENT CLOTH: Use is obvious. The cloth is made of crepe weave to give it a pebbled effect. Light in weight, it is made of wool warp and silk or rayon filling. A piece dyed fabric.

COP: 1. A paper tube upon which thread or yarn is wound.

2. Thread or twine wound into the shape of a hollow cylinder.

3. Filling yarn wound upon a cone-shaped paper tube, carried through the warp shed by the shuttle.

CORDOVA: Long, coarse Argentine wool used mostly for carpet stock.

CORKSCREW CLOTH: This worsted staple used for suiting, coating, and spat cloth is made from a twill-rib weave. The construction is such that warp threads appear only on the face of the goods. The term is a misnomer and its derivations are doubtful. The twill weaves used are called corkscrew weaves to distinguish them from other combination twill effects. The cloth has high texture, is compact, and has a slight nap which is the result of considerable fulling and felting of the goods prior to napping.

CORONATION CLOTH: Originated in England and first seen at the coronation of King Edward the Seventh. In wool and unfinished worsted suitings of solid, ground staple colors, it is a cloth upon which there are single thread stripes or decorations that run lengthwise. The stripes are about one inch apart and a gold or tinsel yarn is used.

The "Queen's Mourning" — black cloth with a white hairline, was a contemporary cloth. A variation of Coronation cloth was noted in this country some years ago. The fancy yarns were red, white and blue, and the fabric was known as "Inauguration Cloth."

CORRIEDALE: A new breed from New Zealand in which the wool and mutton qualities are highly valued in Australia, America, and Japan. The fleece weighs about 12 pounds and sorts from ⅜ to ½ blood. Uniformity of the clip is a problem with this stock, which shows a shrinkage of 50 to 55 per cent. Quality is in the 58-60s range.

CONSIGNING WOOL: A wool marketing term which is widely practiced when prices at shearing time are not to the liking of the wool grower. The wool is shipped to wool dealers or co-operatives in the hope that prices may advance before the wool is sold.

COTE de CHEVAL: A corded cloth of France used as riding habit material and uniform cloth for officers. Cote means ribbed or lined, cheval means horse; hence the cloth has a grosgrain effect, broken at intervals with a short step to produce a striped appearance that is slightly rounded, and may be compared to the ribs noted on the horse.

COTHA MORE: Made for centuries in Eire, this frieze fabric for overcoating is still very popular.

COTTED FLEECE: One in which the fibers are matted, tangled, and very irregular. Caused by the poor health of the sheep or may be due to lack of nourishment. An absence of yolk and suint are noted in fleeces of this sort. Cotted fleeces are inferior, harsher, more irregular and kempier when compared with first-run fleeces.

COTTON-WORSTEDS: Cloth made of cotton warp and worsted filling in imitation of an all-worsted fabric. Much used in men's and women's dressgoods.

COTTS: Brittle, kempy parts of a sheep fleece caused by a diseased sheep or one that has not grazed properly.

COTUL: A British moss which serves as the basis for brown dyes used in coloring Harris tweeds.

COUNT: The number given to yarn to indicate its fineness. Also used to denote the number of warp and filling yarns per inch in a woven cloth.

COUNT OF CLOTH: The number of ends and picks per inch in a woven fabric as counted by an individual. If a cloth is 64 x 60, it means that there are 64 ends and 60 picks per inch in the fabric. A cloth that has the same number of ends and picks per inch in woven goods is called a square cloth — 64 x 64. Pick count is the term that is synonymous with texture and counts of cloth, in speaking of cloth construction.

COUPURE: French for "cut through." The cloth is a cashmere, cut so that the lines cut through show the twill in the lengthwise direction of the cloth.

COVERT: Twilled, lightweight overcoating cloth. Usually made of woolen or worsted yarn with two shades of color, say, a medium and a light brown.

Cloth was first used as a hunting fabric and it is very durable. Name is derived from a similar term in connection with field sport. Covert is very rugged and stands the rigors of wearing very well. Highly desirable cloth and gives smart appearance to the wearer. The material is a staple stock-dyed fabric.

Covert is also made in cotton or rayon, spun rayon, wool and spun rayon. The speckled effect is a characteristic of the goods. Used for coats, raincoats, riding habit cloth, sportswear and suits.

COW HAIR: The fiber is used in coarse carpet yarns, blankets and cheap felted goods. The industry centers in Siberia. The hair, which is from 1½ to 5 cm. in length, is classed in the following manner:

1. Thick, stiff, beard hair.
2. Soft, fine, beard hair.
3. Very fine, soft "wool hair."

COWL: The hood worn by monks of religious orders. Within recent years cowls have become popular in fashionable attire for evening cloaks and wraps.

The nightcap worn by Scottish folks is known by this name.

COWTAIL: A very coarse fleece more like hair than wool, poor in grade and working properties.

CRABBING: Excess moisture is taken from cloth by the hydro-extractor or whizzer. The cloth is then crabbed. In the hydro-extractor, the circumference plate of the machine is perforated with a great number of holes, which in the revolving action of the cylinder, due to centrifugal force, take the water from the cloth. A drain pipe takes off this excess. Whizzing takes only a few minutes and the great number of revolutions per minute of the perforated cylinder leave the cloth in a fairly dry condition. The extractor is filled solidly with the yarn or cloth that is to lose this excess water and moisture.

Following this operation, the cloth is stretched to its full width for further treatment and crabbing performs the function of "setting cloth." Crabbing also "loosens" the goods. The material is run over a cylinder roller series to prevent wrinkles. The cylinders are immersed in hot water and the cloth rotates for about fifteen minutes. The cloth, after an hour or so, is returned to the setting bath under a boiling pressure. This gives the required setting. Sometimes, hot and cold baths are alternated in the process, dependent on the particular conditions.

CRAPE: A sheer, lightweight black worsted worn by the clergy. When used in dressgoods trade the fabric comes in all colors and white.

CRAVENETTE: Registered trade name for the well-known rainproofing process for woolen and worsted fabrics and apparel. The name was coined by a Bradford, England, manufacturer named Wiley; for want of a better term he named the process for the street in which he lived — Craven Street, London. The method was discovered about sixty years ago and is now controlled by the Cravenette Corporation, Hoboken, New Jersey.

The chemical treatment that is given to goods is very effective, particularly on well balanced constructions such as covert, gabardine, elastique, tricotine, whipcord and similar materials.

CREASES: Caused by uneven tension and tautness on the cloth as it goes through the wet and dry finishing departments of the mill. They have to be combatted in the finishing of cloth in order to make the material appealing to the eye. Washer wrinkles are most difficult to remove.

CREOLE: The Dominican Republic raises this sheep, believed to have descended from Lincoln sheep of Great Britain.

CREPE DE DANTE: A fancy crepe fabric made of silk or rayon and wool warp, end-and-end arrangement; the same yarns are used in the filling with two picks of rayon or silk alternating with two woolen picks.

CREPE DE LAINE: The latter word is French for wool. The cloth is a thin, light weight dressgoods fabric, made with plain weave, or a crepe weave. Material is of the sheer variety.

CREPE, WOOLEN: From the Anglicized French word "Crepe." Originally a mourning cloth that showed a crimped appearance in fine silken material which got its derivation from the Latin term, "crispus." This means curled. The cloth, when black, is much used in clerical circles. Light in weight, strong and well constructed worsted material. It is of superior quality and is made with a minutely wrinkled surface to simulate silk or rayon fabric of crinkled effect.

CREPELLA: Wool dress crepe sold under this trade name.

CREPOLINE: Made of lustrous cross-bred wool warp and filling, or with a mohair warp, this 2-up and 2-down warp rib material is constructed so that it gives a crepe effect; this is made possible by "breaking" the warp rib effect. Roxano is another name for this cloth, not popular within recent years.

CREPON: Of the crepe group of cloths but stouter and more rugged than the average crepe. The effect is obtained by the types of yarn used to make the cloth. One way is to use yarn of right and left-hand twist according to some plan or motif; another method is to use yarns with varying twists so that the looser twisted yarns used will give the crepe effect. Taken from the idea of silk yarns used in making georgettes and crepe de Chines. Made of rayon, silk, rayon and wool, rayon and worsted.

Durable, drapes and launders well. Crepe yarns, however, may shrink, hence care should be used in laundering or dry cleaning.

CRIMP: The natural waviness found in wool fibers. Uniformity of waviness indicates superior wool, a decided asset. The more the crimp, the finer is the wool.

In a material, crimp is the difference between any two points in the yarn as it lies in the fabric, and the same two points after the yarn has been removed from the cloth and straightened, expressed as a percentage of the distance between the two points as the yarn lies in the goods. Woven or crimp length of yarn and straightened length are determined in analysing cloth. They are essential in figuring the takeup of the warp in weaving, the reed width, and shrinkages.

Crimp in yarn is caused by the warp ends bending over and under the filling picks and by the compactness of the goods as governed by the pickage used in weaving the material.

CRINKLE: Caustic soda will cause wool to become waved or crinkled.

CRINKLED WOOL: When treated with caustic soda under correct conditions wool has the tendency to become wavy or crinkled.

CRIOLLA: A sheep that dates back to the days of the Conquistadors in Central and South America. Unimproved since that time, it is now found in the Andes Mountain areas and much of it is raised on the Argentine plains. Kempy and straggly in nature, the fiber is used chiefly in the carpet trade. The wool not exported from Argentina is used in mattresses.

CRISPER: A finishing machine used in woolen mills to curl the pile in imitation of chinchilla fabric and other cloths made to simulate fur fabrics.

CROCK: (Etymology undetermined, but probably a simple colloquialism.) That undesirable property of a dyed cloth by which the coloring matter rubs off the fabric and smudges or soils other materials with which it comes into contact. This fault is usually traceable to imperfect dyeing, either in regard to the method employed or the inadaptability of the dyestuff.

CROMPTON, SAMUEL: He invented the mule frame in 1779 by further developing the ideas of Hargraves and Arkwright. The mule frame today is one of the greatest and most phenomenal of all machines. It is composed of twenty to thirty thousand distinct parts and is absolutely self-acting. As many as 1,400 ends of yarn may be spun at one time.

Crompton, a fellow townsman of Arkwright, was born in 1753 in Firwood near Bolton and died in 1827. When he was 16 he learned to spin on Hargraves' frame and at 21 he was already making improvements on it. He sold his invention of the mule for 106 pounds — it was worth a fortune but he let it slip through his fingers. He was poor, weak, shy and retiring in disposition, shrinking and of nervous temperament. He lacked practical knowledge in a world of men, so necessary since the Machine Age is with us, in business. In 1812 he got 5,000 pounds from the English Government for his machine and had given work to 70,000 spinners, 150,000 weavers and 5,000,000 spindles. His combination of Arkwright and Hargraves reminds us that:

"The forces of nature could not further go;
To make a third, she joined the other two."

CROPPING: Shearing the surface of cloth.

CROSS-BRED WOOLS: In this country they are obtained from breeding a long staple sheep with a short one. Much cross-breeding is done all over the world. Several new types and qualities of wool have resulted from sheep crossing and there are now approximately 200 cross-breeds that have been developed from the forty distinct breeds extant today.

CROSS DYED CLOTH: Various animal fiber cloths that have some vegetable fibers in them are cross dyed. A cloth might have a cotton warp and a worsted filling. The cotton yarn is dyed prior to weaving and the animal fiber yarn worsted, requires a dyestuff of different chemical composition than the cotton. The cloth as it comes from the loom would show a dyed cotton warp and an undyed worsted filling. The cloth is then dyed in a vat and the worsted stock is colored, cross dyed.

Another meaning of cross-dyeing implies the multi-colored effects produced in cloths whose fibers possess varying or different affinities for dyestuff. Much man-made fiber cloth is dyed this way; for example, a viscose warp and an acetate filling fabric would often be cross-dyed to obtain pleasing color effects. At present, a popular method of dyeing.

Cross dyeing as contrasted with union dyeing shows that the former method is used to dye two different yarns in two different colors; the latter is used to dye a fabric a solid shade.

CROSSWISE FOLD: The fold or crease of a fabric formed by folding the material crosswise. When folded, the selvages on the same side meet each other.

CRUTCHINGS, DAGGINGS: Wool fibers with insects, pests, possible vermin, dung and fodder removed from sheep a month or so prior to the final shearing. This culling treatment improves the fleece, allows the growth of new wool and relieves the sheep of excessive burden.

C-TYPE MERINO: A Merino sheep classification used in this country. Sheep of this type are larger in stature when compared with A-Type and B-Type. Few folds are noted in this type and for mutton purposes it is the best of the group. The heavy, three-inch staple fleece is the best type stock raised in America. Also known as Delaine Merino or Smooth Merino, the fiber is fine, heavy in the number of serrations per inch, soft, strong, and it possesses the best of spinning properties and characteristics. For a wool of this classification the shrinkage in scouring is rather low.

CULL: Any lamb or sheep that does not come up to expectations; a substandard sheep taken from the stud group.

CURRY WOOL: Britch wool more like hair than wool and of very little value.

CUT: 1. A bolt or length of fabric as it comes from the loom or in the finished state; most woolen and worsted cut lengths run from 60 to 70 yards.

2. The standard of 300 yards to one pound of the Number 1 cut wool yarn; also known as Philadelphia cut system. The run system has 1,600 yards in one pound of the Number 1 yarn and is also known as the Boston system for wool yarn counts or sizes.

CUT LISTING, CUT SELVAGE: A listing or selvage that has been cut during the shearing or damaged by the weaver and allowed to go for some distance in the cloth without being remedied. Weavers should fix broken or cut selvage ends at once.

CUT MARK: A mark placed on the warp during the dressing or beaming to indicate a certain length and serve as a point for separating two adjoining pieces or cuts of cloth when woven.

CUTTLING: 1. Folding fabric down the center with the face inside, selvage to selvage.

2. Giving wool fabric, following fulling, milling, scouring, etc., a chance to lay dormant so that the goods may recover from these rather rough treatments.

DABBING: The actual pressing of worsted fibers into the pins of the Noble or Circular comb or into the fallers on the gill box. The fibers are thus set into suitable position for drawing-off or drafting.

DAGGINGS: See Crutchings.

DAGLOCK WOOL: Unclean, low quality wool lock fibers.

DAGS: Wool locks that are matted with dirt, dung, etc.

DAM: Ewe or female sheep.

DALA: Southern Norway is the home of this native sheep.

DAMP WOOL: Term for wool that has not been given too much attention when stored; will become discolored and take on yellowish cast. Scouring may remove the discolorization but the fibers cannot be used in manufacture of white yarn.

DARTMOOR: Hardy, British Mountain sheep which, however, is raised chiefly on the moorlands at present. Rather free from kemp, the stock is about 40s quality.

DEAD COLORS: Decorations or designs that have been deadened, killed or subdued during the scouring and other operations in finishing.

DEAD WOOL: Wool removed from skin of dead sheep by sweating method.

DECATING, DECATIZING:

WET: Pressed woolen or worsted cloth is wound on a roller and placed in a heated boiler equipped with a vacuum system. Steam is passed through the cloth from the inside to the outside layers and then the treatment is reversed. The vacuum pump takes out the steam on completion of the treatment. The operation sets the material, enhances luster, and gives some assurance against shrinkage.

DRY: It affords protection to the goods between the napping and dyeing operations. The cloth is wound on a perforated roller which allows water circulation. The heat, moisture and pressure set the nap on the goods and increase the luster.

DEFECTIVE: Denotes that something will show to disadvantage in wool after it has been scoured. Fire, water, dampness, and moths cause defects. Wool from sick sheep is called defective, since the working properties are greatly impaired. Texas and California wools are often defective because of burrs and excessive amounts of grit and sand.

DEGREASED WOOL: Wool from which yolk, suint and other foreign matter has been removed by the naphtha method.

DEGREASING: Any method or process used to remove yolk, suint and foreign matter from wool. Naphtha is used as the removal agent.

DELAINE: French for "of wool," the term originally meant a high grade women's dressgoods. Today the word is used to imply a high grade combing wool used in the best worsteds.

Delaine wool is raised in Ohio and adjacent states; one of the best wools grown here. Incidentally, Delaine wool does not necessarily have to come from Delaine sheep, a Merino type found in this country.

DEMI-DRAP: Means "half-cloth" in French; woolen fabric only slightly fulled, sheared and then calendered.

DEMI-LUSTER: Wool of ordinary staple, not so long, and lustrous as luster wool. This wool is obtained from English breeds, such as Cotswold, Devon, Leicester, Lincoln, Romney Marsh, Roscommon and Wensleydale.

DEPAINTING: Removing the paint and tar by a solvent process, from wool and noils taken from sheep so branded for identification. Known as Depitching in England and on the Continent.

DEPILATORY: The compound used in wool pulling, which usually consists of sodium sulphide, sulphuric acid, and ground oyster shells, which gives the lime yield necessary in the action.

DEVON LONG WOOL: This British breed of long wool sheep is more of the mutton type than wool type. Dense, curly locks which average about 10 inches in length are a feature of this lustrous, coarse fiber which is graded at 36s. Because of its firmness and durability, the wool is a favorite in making cassimere and serge.

DEWING: Woolens and worsteds may be treated to a fine spray of water. The material may pass over brushes or rollers revolving in water to receive the treatment. Also known as Damping, Dampening.

DEWLAP WOOL: Those folds of wool obtained under the jaws of the sheep.

DE-WOOLING: Removal of wool from skins of slaughtered sheep. May be accomplished by a lime-water soaking, by soaking in water and then hanging in closed areas in which high temperatures are used, or by painting the flesh side of the skin with a solution of sodium sulphide. The latter treatment takes from about 8 to 24 hours. At the end of the allotted time the wool fibers may be removed as easily as a man removes lather from his face when shaving. Only the tips of the treated fleeces give trouble and they are usually clipped off and are of little or no value. Also known as slipping or depilatory method of removing wool fibers from sheep fleeces.

DIAGONAL: Cloth that shows an oblique twill line that may run to the left or right on the face of the material. Most twill lines are 45 degrees and they go from the lower left hand corner of the cloth to the upper right hand corner. Steep twill lines may be 63, 70 or 75 degrees in angle. Diagonal cloths are easily recognized as the twill line is prominent.

DINGY WOOL: A satisfactory wool except for lack of brightness or poor color.

DINMONT: A wether sheep between the first and second shearings; the sheep is between 1 and 2 years old, as well.

DISCOLORED WOOL: That which is stained or off-shade because of dung, urine, unfavorable weather conditions and being allowed to remain too long in the grease condition.

DISEASED WOOL: Merely wool taken from a diseased sheep: inferior in working properties.

DISTAFF: This staff, from which wool or flax was drawn in the early days of spinning and was manipulated with the spindle, was in use until the seventeenth century. The first distaffs were fashioned like a forked twig. A cleft in the staff held the mass of carded fibers conveniently while the spinner drew out the tufts for twisting between the thumb and finger and wound the strands on the rotating spindle.

The spinning or Saxony wheel superseded the spindle and distaff method of spinning yarn.

DODDS: Wool cut from the tail of the sheep.

DOE: A female goat.

DOESKIN: Used for trousering, broadcloth coating, waistcoat cloth and riding habit fabric. The material is of fine quality, medium weight, smooth face finish, compact, and is made of wool. There are few points of similarity between this cloth and a buckskin. A five or eight-harness satin weave is used and the yarn employed is of high count and twist. A dress finish and slight nap are features of the finished garment.

Rayon fabric of this name is a twill-woven cloth napped on one side; some of the fabric is made from a small satin weave repeat. Used for coating, suiting, sportswear and gives good service.

DOFF: To remove the beam, bobbin, or package from a textile machine. The full bobbin is usually replaced at once with an empty one.

DOFFER COMB: Also known as the doctor knife. This saw-toothed, oscillating blade removes fibers from the surface card clothing of the doffer roller on a carding machine in web form, which is then condensed into a sliver form.

DOFFING: Stripping the sliver from the carding machine.

DOFFING TRUCK: A rectangular-shaped box mounted on casters used for transporting bobbins, quills, and spools between machines or departments of the mill.

DOG-EARING: Cloth which has the tendency to curl or roll up diagonally from a corner at the end of the piece of cut.

DOG SKIN: A heavy filling plush in which the pile effect is of mohair yarn. Made in a variety of effects, the cloth resembles the skin of a dog.

DOGGY WOOL: Wool which is more or less devoid of loftiness, springiness and other positive qualities expected to be found in good commercial fleeces; an inferior wool caused by one or more properties or characteristics being deficient.

DOLLY: A wooden device which agitates or beats cloths in the washing process, British term.

DOMESTIC: 1. A term applied to textiles produced in the United States, especially when they are normally, or traditionally, made here.

2. Also, a general name for household goods, such as sheets, blankets, towels, etc.

DOMESTIC WOOL: 1. In this country, wools obtained east of the Mississippi-Missouri River. Also known as Fleece, Farm and Eastern wools.

2. When applied to wools of the world it means all wool raised here, as against those raised in any other world area.

3. May imply those wools raised east of the Rocky Mountain areas and raised under farming conditions.

DOMESTIC PULLED WOOLS, TRADE CLASSIFICATIONS OF:

AA: 64s and better, very fine, usually short or of average combing length; produced the year round.

AA COMBING: 64s and better, fine staple, produced during winter months.

A COMBING: 60s and 64s staple wools; produced during winter months.

A LAMB: Fine and ½-blood lambs' wool; produced during summer months.

A SUPER: ½-blood, short combing length; produced mostly during fall months.

B COMBING: ⅜-blood staple wools; produced during winter months.

B SUPER: ⅜-blood lambs' wool; produced during summer and fall months.

C COMBING: ¼-blood and coarser, good combing length; produced during winter months.

C SUPER: ¼-blood lambs' wool, short combing length; produced during summer and fall months.

LB: High ⅜-blood, good average to short French combing; produced during fall months.

DONEGAL CARPET: Hand-knotted, heavy structure, good quality carpets made on upright looms in and around Donegal, Ireland. The construction is 8 threads of 2-ply, 8 skeins warp per inch and 2-ply, 5 skeins filling yarn per inch. The pile filling is 3-ply, 3 skeins tied in Ghiordes knot. The tufts are about 2 inches long to give a pile of little more than one-half inch with 16 tufts per square inch.

DONEGAL TWEED: 1. Hand-scoured, home-spun herringbone tweed that was originally made in county of this name in Ireland. The fabric is popular rough-and-ready material which does not possess high texture.

2. Tweed made in the British Isles on power looms; Yorkshire mills provide the yarn for the material, which is dyed and finished in Donegal.

3. Any material which is made in imitation of original Donegal; the term is a popular one in tweed parlance.

DONSKOI: Trade name for southern Russian wool that is used for carpets.

DORSET CLOTH: A low grade, plain woven British fabric made with 2-ply cotton way and irregular wool "bump-filling."

DORSET DOWN: A medium grade British Down breed which gives a wool shrinkage, when scoured, of about 45 per cent.

DORSET HORN: Originally from Dorsetshire, England, this now widely distributed type of sheep produces a medium quality fiber. This active, strong sheep gives a fleece of from 6 to 8 pounds, satisfactory for a 48s to 56s quality yarn. Staple is about 3 inches long and it is noted for its whiteness and crispness. Unlike other breeds of this type, the animal has long spiral horns. The hornless type, developed in England, is called Dorset Down.

DOUBLE: To twist two or more filaments, yarns or threads on a spool to produce a ply-filament, ply-yarn, ply-thread.

DOUBLE-AND-TWIST: This occurs when two ends are twisted together to make a thread. It differs from ply thread in that the double-and-twist thread is single, whereas in the ply thread there are two or more complete yarns plied together and used as a single end. Double-and-twist is a form of mock twist where the thread appears to be actually twisted and plied, but in reality is not. Double-and-twist is made in combination of two or more colors and is used in Bannockburn, salt and pepper effects, and in some Drummond worsteds.

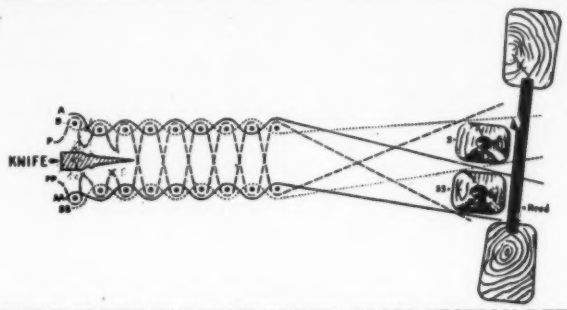
DOUBLE CLOTH: Cloth with two warps and two fillings. Cloths with one warp and two fillings or with two warps and one filling are sometimes classed as double cloth. In double cloth the two cloths are woven, one on top of the other, and are held together by the manner of stitching in which certain threads, at specific times, show on the face or back of the cloth.

There are two methods of stitching: raising the back warp thread over face pick, next to a raiser of the back warp and between two raisers of the face warp, or between a raiser and sinker of the face warp if it cannot be such that the thread will weave neatly between the two face warp ends.

The second method is to lower a face warp end between two sinkers of the back warp and next to a sinker of the face.

Double-cloth materials of two or more warps and fillings are: beaver,

boucle, chinchilla, belting and webbing, kersey, melton, Montagnac, Saxony, Whitney, Worumbo, etc.



DOUBLE CLOTH PLUSH WEAVING, CROSS SECTION DETAIL: Lines A and B represent the ground warp threads of the upper base cloth and AA and BB are those of the low base cloth. Lines P and PP are the pile forming warp threads that weave into both base cloths and which are cut by the knife to form the pile. S and SS are the two shuttles which are thrown through the sheds together and the black dots represent picks of filling threads. — Nat'l Ass'n of Wool Mfrs.

DOUBLE COMBING: The manipulation of worsted combing stock a second time, the purpose of which is to take out any remaining noil not extracted during first-time combings. Resorted to when fine, high counts of worsted yarn are desired.

DOUBLE MILLED: Sheared twice.

DOUBLE PICKS: Defect caused by two picks having worked into the same warp shed in the weaving of the cloth, thus making a sort of rib-effect in the filling direction. The defect is quickly seen when the goods are perched. Double picks often occur when the weaver starts up the loom after fixing some blemish or changing shuttles. Carelessness on the part of the operator causes most of the double picks found in woven cloth.

DOUBLE SERGE: Made of two warps and two fillings. Heavier than other worsted serges. Cloth is clear finished, dyed in the piece and runs from 12 to 20 ounces in weight. The cloth is not in demand as formerly because people do not dress as warmly as they used to years ago.

DOUBLE WORSTED: An old English staple worsted finished at 45 inches.

DOUBLING: Feeding two or more slivers, slubbings, rovings or yarns into some textile machine. Doubling offsets drafting, as it is necessary to double-up on the feeding-in end of a machine to offset and balance this draft which draws out the fibers. Without doubling, it would be impossible to make yarn.

DOUBLING MACHINE: A machine used for folding cloth to one-half or one-fourth of its original width and winding it onto a belt or cylinder.

DOUILLON: French for the very inferior wool grades.

DOUKALA-ABDA: Moroccan sheep, noted for its white fleece, which weighs about 4 pounds.

DOWN, DOWN SHEEP: Various types of medium wool sheep raised in the rolling hill country or "Downs" of southern England. Sheep in this group include Dorset, Oxford, Shropshire, Southdown, Suffolk, etc.

Down breeds have been bred chiefly for mutton and they are of the sturdy type. They are not sufficiently hardy for regular range territory in this country but they are popular in the farming areas east of the Mississippi River, where they are kept in flocks.

DOWN-RIGHTS: Wool sorting term which implies wool from the lower parts of the sides in the fleece form.

DOWN WOOL: This wool ranges between the length and the coarseness of long wools and the shortness and fineness of the fine wools. Fiber length is from 2½ inches to about 4 inches and the quality is from 56s to 60s. The wool has little luster. Lacking in mill properties, the stock is lofty and resilient, thereby making it ideal for knitting yarns.

DOWNY WOOLS: Those which are soft to the feel or hand.

DRAFTING: The drawing of fibers, that may be in some sort of rope form, among themselves to make the stock take on more the appearance of yarn. Excess speed of the front rollers of the machine in question, over the carrier rollers and the back rollers, makes drafting of textile fibers possible.

Twist is added in drafting to sustain the fibers in their form-sliver, slubbing, roving. These forms must not be drafted to the point where the fibers will collapse and not be able to sustain themselves. Doubling-up on the stock fed into machines takes care of this end of the work.

DRAP: French for cloth.

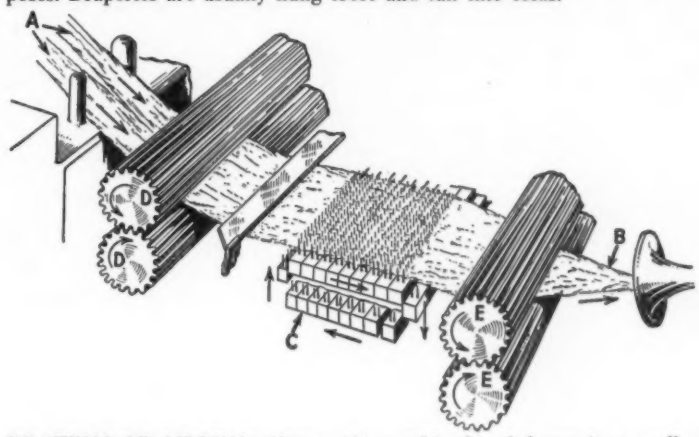
DRAP de BERRY: Named for a town in France, it is a woolen fabric noted for its draping qualities.

DRAP d' ETE: French meaning is "cloth of summer." Used for evening wear and very popular with the clergy. Material is a thin staple woolen or mixture fabric that has a fine twill weave with high counts of yarn used. Is rather expensive.

DRAPS CROISES: French for woolen or worsted fabrics made in twill effects.

DRAPERY: 1. English term for fabrics and materials made of wool.

2. Broad term for various materials used for general decorative purposes. Draperies are usually hung loose and fall into folds.



DRAWING OR GILLING: Slivers (A) combined and drawn into smaller sliver (B). Metal fallers (C) move forward through fibers faster than slivers are fed-in by feed rolls (D), but slower than combined fibers are drawn off by delivery rolls (E). Fibers are paralleled and excess of front rollers over back rollers "reduces" the sliver strands. — Nat'l Ass'n of Wool Mfrs.

DRESS FACE-FINISH: Another name for face-finish fabric, such as beaver, broadcloth, chinchilla, kersey, melton, Saxony, Worumbo, et al.

DRESS WORSTEDS: Group of fine, face finished, staples used for formal and evening wear.

DRESSING: The process of winding yarn on the warp beam. The various colored yarns are set up in the creel and the pattern is "picked." This is according to the design given to the dresser by the mill designer. The yarn is run off the various spools which have the various colored yarns on them and wound onto the dressing frame. The warp is made up in sections on the dressing frames, and as many yards as desired are run off to make the first section; the other sections will have the same yardage.

DROPPINGS: Wool fibers and particles cast out by the various rollers on the card, such as strippers, workers, main cylinder, fancy and doffer rollers.

DRUMMOND WORSTED: A plain oxford worsted, twill-woven with one end of black and one of one or two shades of gray or white, both twisted and then alternated. The filling arrangement is the same as the warp plan. The fabric originated with a firm of English weavers who introduced the pattern.

DRY COMBING: The preparing and combing of worsted stock devoid of oil or emulsion.

DRY FINISHING IN THE WOOLEN OR WORSTED MILL: These are operations or treatments given to cloth in which no water, bath or moisture is applied to the goods.

These precede wet finishing of cloth in the mill — perching, measuring, burling, specking, mending, sewing, experienced sewing. These follow wet finishing — shearing, napping or gigging, pressing, packing, wrapping.

DUB: 1. The dressing or laying of teasels in place on the napping machine.

2. In making leather, the method of rubbing in a softening or waterproof mixture or dressing.

DUFFLE: British blanket of low quality made from low grade woolen yarn; napped on both sides.

DUMPED BALES: Foreign wool bales which have been greatly compressed for shipping purposes and easier handling. The bales are about 4½ feet by 2½ feet by 2½ feet.

DUSTING, WILLOWING, PICKERING: This operation is the beating and the cleaning of the wool insofar as the removal of considerable amounts of loose vegetable matter is concerned. Dusting aids in the ensuing operations, since wool without loose, matted waste materials will naturally work easier.

Dusting is automatically done in the machine; the wool is fed into the frame by an endless feed table, passes between two feed rollers, and then comes in contact with the main cylinder. This has long, rugged spur-teeth which catch the wool and carry it through iron spur teeth located on stationary bars in the machine. The teeth are set evenly so that the teeth of the revolving cylinder will pass cleanly between the teeth on the bars. Thus, the wool receives a rather rigid racking treatment whereby the loose waste matter drops through the meshes in the machine to the receptacle under the frame. Burrs, chaff, dried grass, leaf, motes, pebbles are separated from the fibers of grease wool. The machine, though not very large, does rugged work.

DUVETYNE: Used in the millinery trade and in women's wear. The six-harness irregular satin weave is used, or it is possible to use a seven or eight-end satin construction. Originally the cloth was made of cotton warp and spun silk filling. Other combinations are used as well. Cloth ranges from 10 to 20 ounces in weight in woolen duvetyne, and is stock, skein or piece dyed. Material is face finished to give a smooth, plush appearance. Duvetyne has a kindly feel and comes in many shades and casts of color. When the cloth is in demand it is often difficult to supply it to the trade. One of the better quality cloths. Duvetyne resembles a compact velvet; wears very well, good draping effect, soft to the feel and spots easily.

DYED-IN-THE-GREASE: Some low quality worsteds are dyed prior to the first cloth scouring bath; used only in dark shades.

DYED-IN-THE-WOOL: Woolen stock dyed before blending, oiling, mixing, carding and spinning. Considered as synonomous with stock dyed, a popular method of dyeing woolen fabrics.

DYED SLUBBING: Implies worsted top which has been dyed in the top form and then re-combed before further processing by subsequent machine operations.

EASTERN WOOL: See Domestic wool.

EASTERN PULLED WOOL: Pulled wools obtained from the slaughter houses of the East.

ECHETS: French for worsted hanks or skeins of yarn.

ECOUAILLE: French for coarse wool.

ECRASE: French for a crushed, flattened or laid effect on woven fabric.

EIDER YARN: Name for a softly spun, loosely twisted, cylindrical woolen knitting yarn.

EIDERDOWN: 1. A light-weight warm fabric, napped either on one side or both. Is either knitted or woven. Used for infants' wear, negligees, etc.

2. Also a term for a down quilt. Name derived from the soft down of the eider duck. Must not be called "Eiderdown" unless made of down from the eider duck.

EIS YARN: Woolen knitting yarn, fine in diameter and given a luster treatment for glossiness.

ELASTIQUE: A 63 degree right hand twill weave is used to make this narrow and wide wale, diagonal line fabric. It is made of woolen or worsted yarn, tailors very well and gives excellent service. (See Cavalry Twill, Tricotine.)

ELECTORAL CLOTH: Fine, reversible woolen goods made with a two-up and one-down filling twill weave on the face; the back of the goods shows fine ribs.

ELECTORAL WOOL: A very fine wool originating in Spain and now known by the name, Saxony wool, as well. The use of this wool served as the basis for the high quality fabrics made in woolen and worsted textile plants in Saxony, Germany. Saxony wool is the best merino stock raised in Germany.

EL HAMMAN: A medium type Morocco wool.

ELASTICITY: Wool yarns have a natural elasticity because of the crimp in the fibers themselves. Thus, the fabric can adapt itself to body movement with ease.

ELONGATED TWILL: Any twill of 45 or more degrees in angle — 45, 63, 70, 75 degrees.

ELYSIAN: A fine grade of overcoating cloth, having the nap laid in diagonal lines or ripples, something like, but rougher than chinchilla, and with straighter hair.

EMPRESS CLOTH: Hard twisted, cotton warp and worsted filling cloth, of the rep family. Popular in the middle of the last century and brought out by the late, revered Empress Eugenie. The cloth was all the rage during her era. A two-up and one-down twill is used on the face construction. A rib weave is used for the back structure.

END: A warp yarn or thread that runs lengthwise or vertically in cloth. Ends interlace at right angles with filling yarn to make woven fabric.

ENDROIT: French for the face of a fabric.

ENDS OUT: Warp threads that have broken or snapped during weaving. They cause a light place in the cloth and the streak or mark is readily noted. Blemishes caused by broken ends are fixed either by the weaver or by the sewers in the dry finishing department of the mill.

ENGLISH, BRADFORD SYSTEM: Method of worsted spinning in which the twist is put in continuously and the resultant yarn is wiry, harsh at times, beardy, lustrous, and rugged; the yarn does not always compare too well with worsted yarn made on the French or Franco-Belgian system of spinning.

ENGLISH, BRITISH WOOLS: Term applied to wools from Great Britain and the types represented by these.

ENGLISH YARNS: Those worsted yarns spun in oil on the Bradford or English System.

ENTRE RIOS: This province in Argentina raises this cross-bred wool, which rates 50s to 60s in quality. The wool has a harsh handle but possesses springiness, which makes it ideal for use in knitting yarns.

ENTREBANDS: French for end-pieces or headings of woven cloth.

ENVERS: French for the back of a fabric.

EOLIENNE: Dress material made of silk warp and cotton rayon or worsted filling. The cloth is light in weight, has a glossy finish, is dyed in the piece, and the weave used forms cross ribs.

EPINGLE: Women's suitings and dressgoods material that weighs from 7 to 10 ounces per yard. Plain weave used. Cloth is piece dyed and given clear finish; is popular at times and is a true cycle cloth, ruled by the demands of fashion and style.

EPONGE: The name means "spongy." Is a woolen dressgoods cloth that is very soft and sponge-like. Texture is low, about 20x20. A plain warp and novelty yarn filling is used, or the reverse can be used to advantage. Cloth is bleached and dyed.

Rayon eponge is soft, loose and spongy, somewhat simulating terry cloth. Novelty weaves are used in the fabric, which is used for coats, sportswear and summer suits.

ESCURIAL: A type of Spanish Merino sheep.

ESKIMO CLOTH: A popular overcoating and mackinac fabric, usually made on a five-shaft satin weave for the face construction while a twill weave is used for the backing. About three-quarters of the warp shows on the face. The cloth is made in single colors or may be brightened by the use of wide, vivid stripes which run in the filling direction in the finished garment. A long, substantial nap is seen on the goods.

ESTAMENE: 1. A rough-faced French woolen serge.

2. A low texture worsted fabric made of rather rough or coarse yarn with a two-up and two-down twill weave. This British fabric has a napped, fibrous surface effect.

ESTANCIA: Comparable with the Australian sheep station, this South American term is the opposite of the "colonia or sheep farm."

ESTREMADURA: A six-ply or six-cord knitting yarn.

ETAMINE GLACE: Challis made of rayon or silk warp and worsted filling; comes plain or in attractive prints.

ETOFFE: French for textile material, cloth, fabric, goods, stuff.

ETOFFE du PAYS: Means "country stuff." A coarse, gray homespun cloth made on hand looms and used in peasant localities all over the world.

EWE: A female sheep, pronounced "you."

EXAMINER: In the mill and apparel trades one who closely inspects and examines material for flaws, blemishes, and errors. The mill examiner is responsible for cloth which is well-nigh perfect; the apparel examiner often causes changes to be made in garments to increase their value.

EXAMINING MACHINE: An apparatus for expediting cloth inspection. A bolt or cut of cloth is fitted to a spindle of the machine, is lead across a flat examining table, and secured to a take-up roll. As the material

passes across the examining table any defect or discolorization is easily detected.

EXCILDUN: An excellent wool from Tasmania. It is elastic, fine, lustrous, soft, and pure white. Used only for the most expensive woolen and worsted fabrics.

EXMOOR HORN SHEEP: A hardy English breed of sheep which give a thick fleece of medium length staple stock; shrinkage is about 35 per cent.

EXTRACT WOOL: Wool waste that is secured by carbonizing. Vegetable and other foreign matter is removed from the stock. The carbonized wool is processed in the same manner as shoddy and mungo, and forms small, varying percentages in wool mixes. Acids are used to carbonize the vegetable matter.

EXTRACTOR: A device used to extract water from fabrics, knit goods, or other materials by whirling them within a rotating perforated drum at high speed; a centrifuge.

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BIBLIOGRAPHY FOR DICTIONARY OF WOOLENS AND WORSTEDS

JOHN MCKAY ADAN—Cyril Johnson Woolen Co., Stafford Springs, Conn.

AMERICAN FABRICS—Reporter Publications, Inc., 350 5th Ave., New York City.

APPLIED TEXTILES—Linton and Friedman, State Department Education, Albany, New York, 1941.

CALLAWAY TEXTILE DICTIONARY—Carmichael, Linton and Price, Callaway Mills, La Grange, Georgia & 295 5th Ave., N. Y. City, 1947.

CARPET CRAFTSMANSHIP—Mohawk Carpet Mills, Amsterdam, New York and 295 5th Ave., New York City, 1946.

CROMPTON & KNOWLES LOOM WORKS—Worcester, Massachusetts.

DAN RIVER'S DICTIONARY OF TEXTILE TERMS—Dan River Mills, Danville, Virginia and 40 Worth St., New York City, 1947.

HARRIS TWEED—M. Stanley Brown & Co., 110 East 42nd St., New York City.

MEN'S REPORTER—Reporter Publications, Inc., 350 5th Ave., New York City.

NATIONAL ASSOCIATION OF WOOL MANUFACTURERS—Booklet WOOL and pamphlets, 386 Fourth Ave., New York City, 1947.

STORY OF CAMEL HAIR, IT'S A STROOCK, et al., S. Stroock & Co., 404 5th Ave., New York City.

STORY OF WOOL—W. F. Leggett, Rayon Publishing Co., 303 5th Ave., New York City, 1947.

TEXTILE FIBERS—Matthews-Mauersberger edition, John Wiley and Sons, 440 Fourth Ave., New York City, 5th edition, 1947.

TEXTILE WORLD—Edwin Fowle, Publisher, C. W. Bendigo, Editor, McGraw-Hill Publishing Company, 330 West 42nd St., New York City.

UNITED STATES DEPARTMENT OF AGRICULTURE, Washington, D. C.

WOMEN'S REPORTER—Reporter Publications, Inc., 350 5th Ave., New York City.

WOOL GLOSSARY AND REFERENCE BOOK—Eavenson & Levering Co., Camden, New Jersey, 1941.

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